60000620

Mining District File Summary Sheet

DISTRICT	Rosebud
DIST_NO	4010
COUNTY If different from written on document	Pershing
TITLE If not obvious	Rosebud Drill Hole File - Hole No. RS-499
AUTHOR	D. Schoorl; P.G. Rogowski; B. Morris, K. Allen; L.E. Mackedon; V. Reid
DATE OF DOC(S)	2000
MULTI_DIST Y / N? Additional Dist_Nos:	
QUAD_NAME	Sulphur 7.5'
P_M_C_NAME (mine, claim & company names)	Rosebud Mine; Rosebud Mining Co., LLC; Gator; Hecla Mining Co.; Rosbud Project
COMMODITY If not obvious	gold; silver
NOTES	drill logs; geology; assay; total depth 1335'; invoice; geochemistry 71p.

Keep docs at about 250 pages if no oversized maps attached (for every 1 oversized page (>11x17) with text reduce the amount of pages by ~25)

SS: DD 3/21/08
Initials Date

DB:
Initials Date

SCANNED:
Initials Date

Revised: 1/22/08

RS-499
GATOR

yr 2000

sent to Assay Lab on 12 May 2000

6000 6620

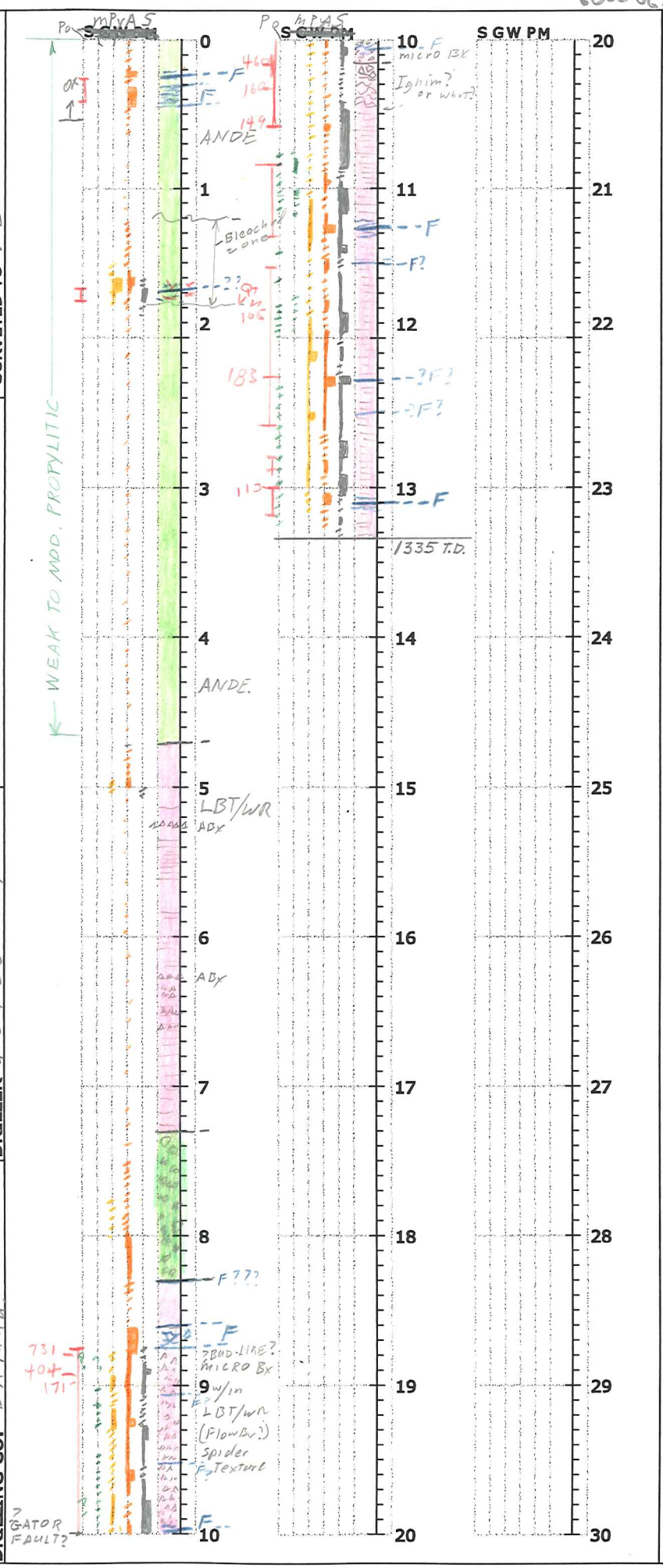
NOTE: Sent for Assay on 12 May 2000

ROSEBUD MINING COMPANY, LLC.

On the N-S Profile
West of Gator.

HOLE #	RS-499
FINISH HOLE	12 May 2000
START HOLE	1 May 2000
LOGGED BY	Rogowski
HOLE TYPE	RC-64
ANGLE	-90
BEARING	—
T.D	1335 TD
SURVEYED TO	Wel-Mav - Vern Reed 1300
PAGE 1 OF	15

COLLAR COORDINATES	
NORTH	2,216,237
EAST	479,273
ELEV	5460
DRILLER	Don Schoorl
DRILLING CO.	EKLund



ALTERATION INTENSITY

1 WEAK — 2 MODERATE — 3 STRONG

VERITHIN COLOR

~~737~~	SILICIFICATION
~~751~~	GREEN CLAY
~~747½~~	WHITE CLAY
755	PYRITE
757	MARCASITE

737

GRAPHIC LOG

VERITHIN COLOR

	BRECCIA
741	FAULT 741
	CONTACT
737	QUARTZ VEIN
741½	CALCITE VEIN
747½	CLAY VEIN
755	PYRITE VEIN

Andesite (GATOR INTRUSIVE)

LBT/WR Rhyolite Flow

BUD-LIKE UNITS IN THE LBT/WR

Hecla MINING COMPANY

ROSEBUD PROJECT DRILL LOG

INTENSITY
1 = WEAK
2 = MODERATE
3 = STRONG
or % by Vol

HOLE NUMBER RS-499
PAGE 2 OF 15
DATE 1 may 2000 to 12 may 2000
LOGGED BY Rogowski
TOTAL DEPTH 1335 TD

LOCATION ROSEBUD. NV
NORTHING 2,216,237
EASTING 479,273
ELEVATION 5460
AZIMUTH —
INCLINATION -90

AREA Gator @ Rosebud 0-100
DRILLING CO. Eklund - Don Schoorl
RIG TYPE 75 E
HOLE SIZE 5 7/8
DOWN HOLE SURVEY BY Well-Nav to 1300' Vern Reed

2/15

FEET	GRAPHIC	ROCK TYPE	LITHOLOGY	HARDNESS	TEXTURE	SILICIFICATION 5%	15%	+25%	MASSIVE	QUARTZ	ARGILLIC 5%	15%	+25%	TYPE	PROPYLITIC % CHLORITE	CALCITE	POTASSIC % K-SPAR	ALUNITE	OXIDATION 5%	15%	+25%	VIENING %	TYPE	SULFIDES 5%	15%	+25%	PY %	CPY %	MAR %	K-SULF %	SULFATE %	BARITE %	METALLURGY OXIDE	SULF	CARBON	MOLYBE	FROM	TO	W	Au	Ag
0		ANDESITE	0-100 Ta -	MH	weathered Fxln And Porp	0					Tr				0	3	n.										0													
10			(Gator Plug)	MH							Tr				0	3	calcite										0													
			Note: under the	MH							1				0	3	coating on fracs																							
20			scope this is	MH							1				0	Tr																								
	F		Yellow clay gouge very simlar	VS	gouge						3				0	0																								
30			to the N. Andesite								1				Tr	Tr																								
	F		wt to Pink clay gouge except plag.	VS	gouge						3				0	0																								
40	F		phenos are	VS							3				0																									
	F		not as parallel	VS							3				0																									
50			Above 45' it is	H							1				1	0																								
			gray to pinkish gray								1					Tr																								
60			& below 45 has								1					0																								
			typical greenish								Tr					0																								
70		ANDESITE	gray color													Tr																								
			plag is white &													Tr																								
80			other & there is													1																								
			also some weak chlor													1																								
90			Also Num. very small													1																								
			biot. pos. Fe mags													1																								
100				H		0					TV				1	1											0													

METALLURGY: Strong Oxidation throughout; Heavy Ox along fract

ANALYTICAL DATA: FROM | TO | W | Au | Ag

Hecla MINING COMPANY

ROSEBUD PROJECT DRILL LOG

INTENSITY
1 = WEAK
2 = MODERATE
3 = STRONG
or % by Vol

HOLE NUMBER RS-499
PAGE 3 OF 15
DATE
LOGGED BY
TOTAL DEPTH

LOCATION ROSEBUD. NV
NORTHING
EASTING
ELEVATION
AZIMUTH
INCLINATION

AREA 1-200
DRILLING CO.
RIG TYPE
HOLE SIZE
DOWN HOLE SURVEY BY

FEET	GRAPHIC	ROCK TYPE	LITHOLOGY	HARDNESS	TEXTURE	ALTERATION: SILICIFICATION 5%	15%	+25%	MAGN %	QUARTS %	ARGILLIC 5%	15%	+25%	TYPE	PROPYLITIC % CHLORITE	CALCITE	POTASSIC % K-SPAR	ALUNITE	OXIDATION 5%	15%	+25%	VIENING %	TYPE	MINERALIZATION: SULFIDES 5%	15%	+25%	PY %	CPY %	MAR %	K-SUL %	SILBONE %	BARITE %	METALLURGY: OXIDE	SULF	OXIDOX	MIXSULF	ANALYTICAL DATA: FROM	TO	W	Au	Ag
100		Andesite	100-200	H	Fx/lg Andesite w/ very small plag phenos	0					tr				1	tr											0														
110			Ta (Gator Andesite)								tr				1																										
			same unit as 0 to								tr				1	tr																									
120			100'	H							tr				1	0																									
			weakly Bleached	MH							1				tr																										
130			from 120 to 155								1																														
											1																														
140		Andesite Bleached	Py from 160 to 170								1																														
			asso. w/ prob								1					0																									
150			silicified struct.								1				tr	tr																									
				MS							1				0	0											0							weak Hem on fract.								
160				MS		0					2																tr														
				H		1					1&2																5														
170		Qr Vn	? F? ?	VH		2					2				0	0											7														
				H		0					1				tr	2											1														
180		Andesite	100 to 120 and	H							1				1	2											0														
			175 to 200 is								tr				1	2																									
190			weakly to mod propy												1	1																									
			white plag is other												1	1																									
200				H		0					tr				1	2											0														

Hecla MINING COMPANY
ROSEBUD PROJECT
DRILL LOG

INTENSITY
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or % by Vol

HOLE NUMBER RS-499
PAGE 4 OF 15
DATE
LOGGED BY
TOTAL DEPTH

LOCATION ROSEBUD. NV
NORTHING
EASTING
ELEVATION
AZIMUTH
INCLINATION

AREA Z -300
DRILLING CO.
RIG TYPE
HOLE SIZE
DOWN HOLE SURVEY BY

4/15

FEET	GRAPHIC	ROCK TYPE	LITHOLOGY	HARDNESS	TEXTURE	ALTERATION: SILICIFICATION 5%	SILICIFICATION 15%	SILICIFICATION +25%	SILICIFICATION MAGR %	SILICIFICATION QUARTS %	ARGILLIC 5%	ARGILLIC 15%	ARGILLIC +25%	ARGILLIC TYPE	PROPYLITIC % CHLORITE	PROPYLITIC % CALCITE	POTASSIC % K-SPAR	POTASSIC % ALUNITE	OXIDATION 5%	OXIDATION 15%	OXIDATION +25%	OXIDATION %	VIENING TYPE	MINERALIZATION: SULFIDES 5%	SULFIDES 15%	SULFIDES +25%	PY %	CPY %	MAR %	AC-SUL %	SILBITE %	BARITE %	METALLURGY: OXIDE	SULF	OXIDOX	MOLYBE	ANALYTICAL DATA: FROM	TO	W	Au	Ag
200		Andesite	200-300 (Ta)	H	M to F X'ln Andesite Porp. Hrd, qveeins gray w/ Rd Hem on fract	0					Tr	1			1	1											0														
210			(Gator Andesite)																																						
			still very similar																																						
220			to Neandesite																																						
										Weak Prop by 111.76																														
230			Much less alt																																						
			after 240'																																						
240											Tr	1			1																										
											Tr				Tr	1																									
250																1																									
																Tr																									
260										Weak to very weak																														
270																Tr																									
																1																									
280																																									
290																																									
300				H		0					Tr				tr	1											0														

Hem only on fract — Prob below surface Ox

Hecla MINING COMPANY

ROSEBUD PROJECT DRILL LOG

INTENSITY
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or % by Vol

HOLE NUMBER RS-499
PAGE 5 OF 15
DATE
LOGGED BY
TOTAL DEPTH

LOCATION ROSEBUD. NV
NORTHING
EASTING
ELEVATION
AZIMUTH
INCLINATION

AREA
DRILLING CO.
RIG TYPE
HOLE SIZE
DOWN HOLE SURVEY BY

3-400

5/15

FEET	GRAPHIC	ROCK TYPE	LITHOLOGY	HARDNESS	TEXTURE	ALTERATION: SILICIFICATION 5%	SILICIFICATION 15%	SILICIFICATION +25%	SILICIFICATION MATRIX %	SILICIFICATION CLASTS %	ARGILLIC 5%	ARGILLIC 15%	ARGILLIC +25%	ARGILLIC TYPE	PROPYLITIC % CALCITE	POTASSIC % K-SPAR	POTASSIC % ALUNITE	OXIDATION 5%	OXIDATION 15%	OXIDATION +25%	VIENING %	VIENING TYPE	MINERALIZATION: SULFIDES 5%	SULFIDES 15%	SULFIDES +25%	PY %	CPY %	MAR %	K-SLF %	SILBNITE %	BARITE %	METALLURGY: OXIDE	SULF	OXIDOX	MOLYBDE	ANALYTICAL DATA: FROM	TO	W	Au	Ag
300		ANDESITE	3 to 400 - Ta	H.	Fxln. Hydrosite Dump. Gray Green	0					Tr				Tr	2										0						Red Specularite on fract - Not surface Ox							
310			(Gator Andesite)													2																								
			same as above													1																								
320			so much it looks													1																								
			very similar to													1																								
330			N. Ande.													2																								
			Hem is on													1																								
340			fract & Replaces													1																								
			some Bio planes													1																								
350																2																								
																1																								
360																1																								
370																1																								
380																1																								
390																1																								
																Tr																								
																Tr																								
400				H		0					K				Tr	1										0														

Hecla MINING COMPANY
ROSEBUD PROJECT DRILL LOG

INTENSITY
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or % by Vol

HOLE NUMBER RS-499
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DATE
LOGGED BY
TOTAL DEPTH

LOCATION ROSEBUD. NV
NORTHING
EASTING
ELEVATION
AZIMUTH
INCLINATION

AREA 4-500
DRILLING CO.
RIG TYPE
HOLE SIZE
DOWN HOLE SURVEY BY

6/15

FEET	GRAPHIC	ROCK TYPE	LITHOLOGY	HARDNESS	TEXTURE	ALTERATION: SILICIFICATION 5%	15%	+25%	MASSIVE	QUARTZ %	ARGILLIC 5%	15%	+25%	TYPE	PROPYLITIC % CHLORITE	CALCITE	POTASSIC % K-SPAR	ALUNITE	OXIDATION 5%	15%	+25%	%	VIENING TYPE	MINERALIZATION: SULFIDES 5%	15%	+25%	PY %	CPY %	MAR %	K-SUL %	SULFATE %	BARITE %	METALLURGY: OXIDE	SULF	OPEN	MOISTURE	ANALYTICAL DATA: FROM	TO	W	Au	Ag
400		ANDESITE	400 to 475 (Ta)	H	Andesite Porph	0					Tr				1	1											0						Hem on fract - Not from surface Ox								
410			Gator Andesite																																						
			Andesite Porphyry																																						
420			propylitized w/																																						
			plag becoming altered																																						
430			& Femags to chlorite																																						
			Chlorite in groundmass also																																						
440			Still looks		Fxln Hydesite Norm Green																																				
			very similar to																																						
450			N. Ander.												1	1																									
460																1																									
470		RHYOLITE Flow		H							Tr																														
			475-500 LBT/WR	H							Tr																														
480			Fxln w/ only a Tr								Tr																														
			of flow banding								Tr																														
490				H	Pinkish Gray						1																														
			Trace of very fine cubic py @ 500	MS							1																0														
500				MS		0					2					1											Tr	1	very fine cubic												

Hecla Mining Company
ROSEBUD PROJECT DRILL LOG

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or % by Vol

HOLE NUMBER RS-499
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DATE
LOGGED BY
TOTAL DEPTH

LOCATION ROSEBUD. NV
NORTHING
EASTING
ELEVATION
AZIMUTH
INCLINATION

AREA
DRILLING CO.
RIG TYPE
HOLE SIZE
DOWN HOLE SURVEY BY

5-600 7/15

FEET	GRAPHIC	ROCK TYPE	LITHOLOGY	HARDNESS	TEXTURE
500			500 to 505 +/- 50% alt	S	
			Argillic w/ very fine P.Y.		
510				H	
			500 to 600 - LBT/WR		
520		A BY	occa. traces of		
			flow bands		
530			looks maroon from		
			Hem & bar		
540			bio. phenocs		Fxln RHYO = tan
			Some very fine		Phenos grays
550			xln. spec. Hem on		
			fract. surfaces		
560					
			← minor cal stgr.		
570					Fxln RHYO = tan
					Reddish Brown
580					
590					
600				H	

RHYOLITE

FEET	ALTERATION: SILICIFICATION 5%	15%	+25%	MASSIVE	QUARTZ	ARGILLIC 5%	15%	+25%	TYPE	PROPYLITIC % CHLORITE	CALCITE	POTASSIC % K-SPAR	ALUNITE	OXIDATION 5%	15%	+25%	VIENING %	TYPE	MINERALIZATION: SULFIDES 5%	15%	+25%	PY %	CPY %	MAR %	K-SUL %	SULFATE %	BARITE %	METALLURGY: OXIDE	SULF	CARBON	MOLYBDE	ANALYTICAL DATA: FROM	TO	W	Au	Ag
500	tr					1					1											tr														
510	0					tr					2											0														
520											1																									
530																																				
540																																				
550																																				
560																																				
570																																				
580																																				
590																																				
600	0					tr					1											0														

Hecla MINING COMPANY

ROSEBUD PROJECT DRILL LOG

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HOLE NUMBER RS-499
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DATE
LOGGED BY
TOTAL DEPTH

LOCATION ROSEBUD. NV
NORTHING
EASTING
ELEVATION
AZIMUTH
INCLINATION

AREA 6-700
DRILLING CO.
RIG TYPE
HOLE SIZE
DOWN HOLE SURVEY BY

8/15

FEET	GRAPHIC	ROCK TYPE	LITHOLOGY	HARDNESS	TEXTURE	ALTERATION: SILICIFICATION 5%	SILICIFICATION 15%	SILICIFICATION +25%	SILICIFICATION MAJOR %	SILICIFICATION CLASTS %	ARGILLIC 5%	ARGILLIC 15%	ARGILLIC +25%	ARGILLIC TYPE	PROPYLITIC % CALCITE	PROPYLITIC % CHLORITE	POTASSIC % K-SPAR	POTASSIC % ALUNITE	OXIDATION 5%	OXIDATION 15%	OXIDATION +25%	VIENING %	VIENING TYPE	MINERALIZATION: SULFIDES 5%	SULFIDES 15%	SULFIDES +25%	PY %	CPY %	MAR %	K-SLF %	SILBNE %	BARITE %	METALLURGY: OXIDE	SULF	OXBOX	MCOUE	ANALYTICAL DATA: FROM	TO	W	Au	Ag
600			600 - 700	H		0					tr					Tr											0													
610			LBT/uR Rhyolite																																						
			Flow, very fine x/ln																																						
620			ABx - Auto Bx																																						
		ABx	in part.																																						
630		ABx																																							
		ABx																																							
640		RHYOLITE FLOW			VFx/ln RHYOLITE needlis 13mm (14 cm)																																				
																Tr																									
650		ABx														0																									
		A Bx														Tr																									
660		A Bx																																							
670																																									
680																																									
690																Tr																									
700				H		0					Tr					0											0														

Hecla MINING COMPANY

ROSEBUD PROJECT DRILL LOG

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HOLE NUMBER RS-499
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DATE
LOGGED BY
TOTAL DEPTH

LOCATION ROSEBUD. NV
NORTHING
EASTING
ELEVATION
AZIMUTH
INCLINATION

AREA
DRILLING CO.
RIG TYPE
HOLE SIZE
DOWN HOLE SURVEY BY

7-800

9/15

FEET	GRAPHIC	ROCK TYPE	LITHOLOGY	HARDNESS	TEXTURE	ALTERATION: SILICIFICATION 5%	SILICIFICATION 15%	SILICIFICATION +25%	SILICIFICATION MASSIVE	SILICIFICATION QUARTZ	ARGILLIC 5%	ARGILLIC 15%	ARGILLIC +25%	ARGILLIC TYPE	PROPYLITIC % CHLORITE	PROPYLITIC % CALCITE	POTASSIC % K-SPAR	POTASSIC % ALUNITE	OXIDATION 5%	OXIDATION 15%	OXIDATION +25%	VIENING %	VIENING TYPE	MINERALIZATION: SULFIDES 5%	SULFIDES 15%	SULFIDES +25%	PY %	CPY %	MAR %	K-SUL %	SEBONE %	BARITE %	METALLURGY: OXIDE	SULF	CARBON	MOLYBE	ANALYTICAL DATA: FROM	TO	W	Au	Ag
700			700 - 730 LDT/WR	H		0					tr					tr											0													
710			as above													tr																									
																tr																									
720					1=Xly Rb Brn & Red-Brown																																				
730				H																																				
			730 - 755? BUD Like? Appears as above but has a progressive increase in clasts w/depth - has same color as above.	MH	1=Xly Brown & Red Brown																																			
740																																									
750																																									
			755 to 800 BUD LIKE same as 730 to 755 but has an increase in pale green waxy matrix clasts appear the same	MH	CLASTIC w/ Pale Green						tr																														
760				S							1																													
											1					tr																								
770											1					1																									
											1					1											0														
780											1					2											tr														
											1					2											?														
790											1					1											tr														
											1					1											?														
800				S		0					1					1											tr														

Hecla MINING COMPANY

ROSEBUD PROJECT DRILL LOG

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HOLE NUMBER RS-499
PAGE 10 OF 15
DATE
LOGGED BY
TOTAL DEPTH

LOCATION ROSEBUD. NV
NORTHING
EASTING
ELEVATION
AZIMUTH
INCLINATION

AREA
DRILLING CO.
RIG TYPE
HOLE SIZE
DOWN HOLE SURVEY BY

8-900

10/15

FEET	GRAPHIC	ROCK TYPE	LITHOLOGY	HARDNESS	TEXTURE	ALTERATION: SILICIFICATION 5%	SILICIFICATION 15%	SILICIFICATION +25%	SILICIFICATION MAJOR	SILICIFICATION QUARTZ	ARGILLIC 5%	ARGILLIC 15%	ARGILLIC +25%	ARGILLIC TYPE	PROPYLITIC % CHLORITE	PROPYLITIC % CALCITE	POTASSIC % K-SPAR	POTASSIC % ALUNITE	OXIDATION 5%	OXIDATION 15%	OXIDATION +25%	VIENING %	VIENING TYPE	MINERALIZATION: SULFIDES 5%	SULFIDES 15%	SULFIDES +25%	PY %	CPY %	MAR %	K-SUL %	SULFATE %	BARITE %	METALLURGY: OXIDE	SULF	OPEOX	MOCUR	ANALYTICAL DATA: FROM	TO	W	Au	Ag
800			800 – 830																																						
			BUD-Like	S		0					2+	3				tr											0														
810			Pale green waxy		CLASTIC Pale green					Pale green clay						tr																									
			matrix w/ LBT/pink clasts													1																									
820			Bio. Broken in pale green													1																									
											2+	3				tr																									
830				S	CLASTIC Mix					Brown	1+	2				1																									
		?	NO GOUGE BUT COULD BE FAULT	S							1+	2				1																									
840			835 – LBT/WR	H	Rhyo. Flow drk gray + Brn						tr					1																									
			Rhyo Flow VFx 1%	H												1																									
850																1																									
																1																									
860				H							tr					tr																									
		F?	very soft Brown Rhyo & very strong Argi	VS	RHYO CLASTIC Brown						3			Celadonite		1																									
870		F?	may be a FAULT.								3					2																									
		F	Orig. a clastic	VS		0					3					2											0														
880		BUD LIKE	875 to 900 – CLASTIC → ~~Auto Br.~~ – STRONG ALT.	V.H.	? Brn + Gray	tr					2					2											0														
			Fine white + gray			1					2			Tr		1											tr															
890			silicification w/ white		GRITY Lt gray	2+3				wtclay →	2					0											1							← Poss Py who Rep by Py only a trace								
			clay			2					2					0											1														
900				VH		2					2					0											2														

Hecla MINING COMPANY
ROSEBUD PROJECT DRILL LOG

INTENSITY
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HOLE NUMBER RS-499
PAGE 11 OF 15
DATE
LOGGED BY
TOTAL DEPTH

LOCATION ROSEBUD. NV
NORTHING
EASTING
ELEVATION
AZIMUTH
INCLINATION

AREA 9-1000
DRILLING CO.
RIG TYPE
HOLE SIZE
DOWN HOLE SURVEY BY

11/15

FEET	GRAPHIC	ROCK TYPE	LITHOLOGY	HARDNESS	TEXTURE
900		? wt clay	900–1000 micro. by? or clastic w/very strong alt some 3 silica + some wt. clay (sometimes called spider texture).	S	
910				MH	
				mH	
920			← Note: Low Left cluster of Hex xls pass mar or Rep of pyr. hxls. by Py.	H	
930		LBT/WR micro BX or spider tex Very alt	900–1000 Alt. intensity varies within the 5' interval see a lot of soft wt. clay and hard gray silica together. Remains micro by for entire interval (Not sure what to think of this). It could be Bud like clastic but clasts are very small.		STRONGLY ALT: micro Bx Text. wt to Lt Gray
940					
950					
960		?			
970					
980					
990					
1000		?		H	

FEET	ALTERATION: SILICIFICATION 5%	15%	+25%	MASS	QZ-DIS	ARGILLIC 5%	15%	+25%	TYPE	PROPYLITIC % CLORITE	CALCITE	POTASSIC % K-SPAR	ALUNITE	OXIDATION 5%	15%	+25%	%	VIENING TYPE
900	1+2	Gray silica				2-3	wt clay				0							
910	1	"				2+3	"											
	1	"				2+3	"											
920	1	"				2+3	"											
	tr					3	"											
930	2+3					2	"											
	1+2					2	"											
940	1+2					2	"											
	1+2					2	"											
950	1+2					2	"											
	1+2					2	"											
960	1					2	"											
	1					2+3	wt clay											
970	1					2+3	"											
	2					2												
980	2+3					1+2												
	3					1												
990	3					1												
	3					1+2					0							
1000	3					2	wt clay				tr							

FEET	MINERALIZATION: SULFIDES 5%	15%	+25%	PY %	CPY %	MAR %	K-SUL %	SEBNITE %	BARITE %	METALLURGY: OXIDE	SULF	CARBON	MOISTURE	ANALYTICAL DATA: FROM	TO	W	Au	Ag
900				1	Py C	tr												
910				Tr														
				1	Py C													
920				2	"	1	hex xls											
				2	"	tr	"											
930				2	Py C+A	Tr	? xls											
				1		1												
940				1	Py C/D													
				1														
950				1		tr	Thin Lath.											
				1		tr	"											
960				tr		tr	"											
				1		tr												
970				1		1												
				2	Py A+C	tr?												
980				2		1												
				3		1												
990				2		Tr												
				tr		Tr	Hex xl											
1000				1		?												

Hecla Mining Company
ROSEBUD PROJECT DRILL LOG

INTENSITY
1 = WEAK
2 = MODERATE
3 = STRONG
or % by Vol

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TOTAL DEPTH

LOCATION ROSEBUD. NV
NORTHING
EASTING
ELEVATION
AZIMUTH
INCLINATION

AREA 10-1100
DRILLING CO.
RIG TYPE
HOLE SIZE
DOWN HOLE SURVEY BY

12/15

FEET	GRAPHIC	ROCK TYPE	LITHOLOGY	HARDNESS	TEXTURE
1000		F? micro-Breccia	1000 to 1015	H	Breccia med gray
1010			LBT/WR micro bx silica matrix		
1020		CONTORTED RHYO FLOW	1015 to 1025 ABx or strong welded or Recmorphic tuff. Shows strong flow text. Not the same as above		CONTORT Flow LT to med gray
1030			1025 to — same as 10-15 to 1025 but No Bx. Flowbands are contorted as above & much less alt down to 1040		
1040			1040 to 1100 — more Argillic alt & has drk green on fract (celadonite) toward		
1050		LBT/WR RHYOLITE FLOW	1100 LT grades into planar laminated LBT/WR Flow		VFx in Rhyo Flow white to LT gray
1060					
1070			Note: silicification after 1050 is white & chalcedonic		
1080					
1090					
1100				H	

FEET	ALTERATION: SILICIFICATION 5%	15%	+25%	MASSIVE	QUARTZ	ARGILLIC 5%	15%	+25%	TYPE	PROPYLITIC % CHLORITE	CALCITE	POTASSIC % K-SPAR	ALUNITE	OXIDATION 5%	15%	+25%	VIENING %	TYPE
1000	2+	3				1	wt	clay			0							
1010	3					tr	"				0							
	2+	3				1	"				0							
1020	tr-1					tr					tr	micro Vn cal						
	1					tr					tr							
1030	1					tr					1							
	1					tr					tr							
1040	1					tr					tr							
	2+	3				1					1							
1050	2+	3				1				celad								
	3					tr				tr								
1060	2					1-2			celadonite on fract	tr								
	3					tr				tr								
1070	3					tr				tr								
	3					tr												
1080	3					tr					tr							
	3					tr					1							
1090	2+	3				1					0							
	1					2					0							
1100	2					1					0							

FEET	MINERALIZATION: SULFIDES 5%	15%	+25%	PY %	CPY %	MAR %	X-SUL %	SULFATE %	BARITE %	METALLURGY: OXIDE	SULF	CARBON	MOLYBDE	ANALYTICAL DATA: FROM	TO	W	Au	Ag
1000				1														
1010				tr														
				tr														
1020				tr														
				tr														
1030				tr														
				1	Py C													
1040				1	Py C+A													
				tr														
1050				tr														
				tr														
1060				tr														
				tr														
1070				tr														
				tr					Po	Magnetic Po								
1080				tr					tr									
				tr					1									
1090				tr	1?				tr									
				tr	1?				tr									
1100				1					1									

Hecla MINING COMPANY

ROSEBUD PROJECT DRILL LOG

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LOCATION ROSEBUD. NV
NORTHING
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AZIMUTH
INCLINATION

AREA
DRILLING CO.
RIG TYPE
HOLE SIZE
DOWN HOLE SURVEY BY

11-1200

13/15

FEET	GRAPHIC	ROCK TYPE	LITHOLOGY	HARDNESS	TEXTURE	ALTERATION: SILICIFICATION 5%	15%	+25%	MAGR	QUARTZ	ARGILLIC 5%	15%	+25%	TYPE	PROPYLITIC % CHLORITE	CALCITE	POTASSIC % E-SPAR	MUSCOVITE	OXIDATION 5%	15%	+25%	VIENING %	TYPE	MINERALIZATION: SULFIDES 5%	15%	+25%	PY %	CPY %	MAR %	K-SUL %	SELENITE %	PO %	METALLURGY: OXIDE	SULF	OXIDOX	MOLYBE	ANALYTICAL DATA: FROM	TO	W	Au	Ag
1100			1100 to 1200 planar Laminated LBT/WR	H		3					1					0										tr		2			Po tr									
1110						2					2															1		1			tr									
			Above 1130 is			2φ 3					1															2		tr			tr									
1120			stronger alteration w/a mix of chalcedonic & gray granular silica			2					2															2		Tr													
		F				2					2					0										2														
1130						1					3	wt clay				tr										3		?												
						2					1					0										3														
1140			Below 1130 is		Vesicular RHYO FLOW	3					tr					1										3					tr									
			white chalcedony			2					1					1										1														
1150		F?	a(?)			1					2	wt clay				1										tr														
						1					2					1										tr														
1160						2					1					1										tr					tr									
			suspect that			2φ 3					tr					1										2														
1170			some or most of the Marcasite			2					1					0										1														
			Laths may really be Py rep'd of Po			2					2					tr										tr		Tr												
1180						2					2					0										1		tr			tr									
						3					tr															1		1	Lath		tr									
1190						3					1															2	Py H	?	"		tr									
						2φ 3					1															2					tr									
1200				H		2					2					0										2		?			tr									

RHYOLITE

Hecla MINING COMPANY

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LOCATION ROSEBUD. NV
NORTHING
EASTING
ELEVATION
AZIMUTH
INCLINATION

AREA
DRILLING CO.
RIG TYPE
HOLE SIZE
DOWN HOLE SURVEY BY

12-1300

14/15

FEET	GRAPHIC	ROCK TYPE	LITHOLOGY	HARDNESS	TEXTURE	ALTERATION: SILICIFICATION 5%	SILICIFICATION 15%	SILICIFICATION +25%	SILICIFICATION MAJOR	SILICIFICATION QUARTZ	ARGILLIC 5%	ARGILLIC 15%	ARGILLIC +25%	ARGILLIC TYPE	PROPYLITIC % CHLORITE	PROPYLITIC % CALCITE	POTASSIC % K-SPAR	POTASSIC % ALUNITE	OXIDATION 5%	OXIDATION 15%	OXIDATION +25%	VIENING %	VIENING TYPE	MINERALIZATION: SULFIDES 5%	SULFIDES 15%	SULFIDES +25%	PY %	CPY %	MAR %	K-SUL %	SULFATE %	BARITE %	METALLURGY: OXIDE	SULF	OXIDOX	MOLYBE	ANALYTICAL DATA: FROM	TO	W	Au	Ag
1200		RHYOLITE	1200 - 1300	H		1					2					0											3		Could be Py after Po											
1210			planar laminated			2					2					0											3														
			LBT/WR. Bleached			2					1					0											4														
1220			to Lt gray & white.			1					2					0											3														
			Alt is not complete			1					2					0											2														
1230			and see an unusual			3					3	wt clay gouge				0											2					Po									
			amt of pyrrhotite			2					2					0											2					1									
1240			Py is cubic or			2					2					tr											1					1									
			Anhedral - a			2					2					tr											2					tr									
1250			laths appear to			2+3					3	wt clay gouge				tr											2					tr									
			be fine xln py			2+3					2					0											4					tr									
1260			but many are			2					2					tr											3					1	Hex xls								
			magnetic pyrrho.			2					1					1											2					1									
1270		LBT/WR PLANAR			VF xln Rhyo Flow lt Gray to Pale Green	3					1					tr											2					tr									
						3					1					1											1					tr									
1280						3	CHALCEDONIC SILICA				1					1											tr					1									
						2					1+2					1											2					tr									
1290						2					2					0											2														
						3					1					0											2					tr									
1300				H		3					1					0											2					tr									

Hecla MINING COMPANY

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or % by Vol

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DATE
LOGGED BY
TOTAL DEPTH 1335 TD

LOCATION ROSEBUD. NV
NORTHING
EASTING
ELEVATION
AZIMUTH
INCLINATION

AREA
DRILLING CO.
RIG TYPE
HOLE SIZE
DOWN HOLE SURVEY BY

13-1335 TD

15/15

FEET	GRAPHIC	ROCK TYPE	LITHOLOGY	HARDNESS	TEXTURE	ALTERATION: SILICIFICATION 5%	SILICIFICATION 15%	SILICIFICATION +25%	SILICIFICATION MATRIX	SILICIFICATION CLASTS	ARGILLIC 5%	ARGILLIC 15%	ARGILLIC +25%	ARGILLIC TYPE	PROPYLITIC % CHLORITE	PROPYLITIC % CALCITE	POTASSIC % K-SPAR	POTASSIC % ALUNITE	OXIDATION 5%	OXIDATION 15%	OXIDATION +25%	VIENING %	VIENING TYPE	MINERALIZATION: SULFIDES 5%	SULFIDES 15%	SULFIDES +25%	PY %	CPY %	MAR %	K-SLF %	SLBNE %	~~SPHE~~ Po %	METALLURGY: OXIDE	SULF	CARBON	MOISTURE	ANALYTICAL DATA: FROM	TO	W	Au	Ag
1300		F	1300 to 1335 TD	H	F.x.'s in Rhyo. 1=10 wt & Pale green & Lt gray	3					tr					0											1					tr									
1310		F	L.B.T./w.R.	S		tr					3	wt + grn clay				1											tr					tr									
			marked decrease in	H		1					1					0											tr					tr									
1320			alteration. Pale-	H		1					1					tr											1					tr									
			green color @ end	mH		2					1					1											0					tr									
1330			w/ blue-gray weakly	mH		1					tr					1											0					0									
			Rhyolite.	MH		tr					tr					1											0					0									
			1335 TD																																						
40																																									
50																																									
60																																									
70																																									
80																																									
90																																									
00																																									

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP057428

PO BOX 11530
RENO NV,USA
Ph.(775) 356-0606, Fax.(775) 356-1413

HECLA MINING COMPANY

COPIES TO : BRIAN MORRIS

: KURT ALLEN

:

:

CLIENT REFERENCE No: RS-499 RECEIVED : 15 MAY 2000

No. SAMPLES : 268 REPORTED : 23 MAY 2000

MAIN SAMPLE TYPE : DRILL CUTTINGS

NEVADA LEGISLATIVE DISCLAIMER :-
The results of this assay were based solely upon the content of the sample submitted. Any decision to invest should be made only after the potential investment value of the claim or deposit has been determined based on the results of assays of multiple samples of geological materials collected by the prospective investor or by a qualified person selected by him and based on an evaluation of all engineering data which is available concerning any proposed project.

ANALYSIS	ANALYTICAL METHOD	QUALITY PARAMETER	UNIT	DETECTION
Au	FA30	15%	ppb	5
Au(R)	FA30	15%	ppb	5
Au(OZ)	FA30	15%	OPT	0.001
Au(RZ)	FA30	15%	OPT	0.001
Ag	D210	10%	ppm	0.5
Ag(OZ)	D210	10%	OPT	0.02

SIGNATORY : Leonard E. Mackedon B.S.

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7753561413

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP057428

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD
REFERENCE : RS-499

REPORTED : 23 MAY 2000

SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-499 0000-0005	5		<0.001		<0.5	<0.02
RS-499 0005-0010	11		<0.001		<0.5	<0.02
RS-499 0010-0015	<5		<0.001		<0.5	<0.02
RS-499 0015-0020	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-499 0020-0025	34		<0.001		<0.5	<0.02
RS-499 0025-0030	25		<0.001		<0.5	<0.02
RS-499 0030-0035	<5		<0.001		<0.5	<0.02
RS-499 0035-0040	<5		<0.001		<0.5	<0.02
RS-499 0040-0045	<5		<0.001		<0.5	<0.02
RS-499 0045-0050	<5		<0.001		<0.5	<0.02
RS-499 0050-0055	<5		<0.001		<0.5	<0.02
RS-499 0055-0060	13		<0.001		<0.5	<0.02
RS-499 0060-0065	<5		<0.001		<0.5	<0.02
RS-499 0065-0070	8		<0.001		<0.5	<0.02
RS-499 0070-0075	5		<0.001		<0.5	<0.02
RS-499 0075-0080	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-499 0080-0085	<5		<0.001		<0.5	<0.02
RS-499 0085-0090	<5		<0.001		<0.5	<0.02
RS-499 0090-0095	<5		<0.001		<0.5	<0.02
RS-499 0095-0100	<5		<0.001		<0.5	<0.02
RS-499 0100-0105	<5		<0.001		<0.5	<0.02
RS-499 0105-0110	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-499 0110-0115	<5		<0.001		<0.5	<0.02
RS-499 0115-0120	<5		<0.001		<0.5	<0.02
RS-499 0120-0125	<5		<0.001		<0.5	<0.02

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP057428

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REFERENCE : RS-499

REPORTED : 23 MAY 2000

SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-499 0125-0130	<5		<0.001		<0.5	<0.02
RS-499 0130-0135	<5		<0.001		<0.5	<0.02
RS-499 0135-0140	<5		<0.001		<0.5	<0.02
RS-499 0140-0145	<5		<0.001		<0.5	<0.02
RS-499 0145-0150	<5		<0.001		<0.5	<0.02
RS-499 0150-0155	5		<0.001		<0.5	<0.02
RS-499 0155-0160	<5		<0.001		<0.5	<0.02
RS-499 0160-0165	16		<0.001		<0.5	<0.02
RS-499 0165-0170	70	68	0.002	0.002	0.6	<0.02
RS-499 0170-0175	6		<0.001		<0.5	<0.02
RS-499 0175-0180	<5		<0.001		<0.5	<0.02
RS-499 0180-0185	<5		<0.001		<0.5	<0.02
RS-499 0185-0190	<5		<0.001		<0.5	<0.02
RS-499 0190-0195	<5		<0.001		<0.5	<0.02
RS-499 0195-0200	<5		<0.001		<0.5	<0.02
RS-499 0200-0205	<5		<0.001		<0.5	<0.02
RS-499 0205-0210	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-499 0210-0215	<5		<0.001		<0.5	<0.02
RS-499 0215-0220	<5		<0.001		<0.5	<0.02
RS-499 0220-0225	<5		<0.001		<0.5	<0.02
RS-499 0225-0230	<5		<0.001		<0.5	<0.02
RS-499 0230-0235	<5		<0.001		<0.5	<0.02
RS-499 0235-0240	<5		<0.001		<0.5	<0.02
RS-499 0240-0245	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-499 0245-0250	<5		<0.001		<0.5	<0.02

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SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-499 0250-0255	<5		<0.001		<0.5	<0.02
RS-499 0255-0260	<5		<0.001		<0.5	<0.02
RS-499 0260-0265	<5		<0.001		<0.5	<0.02
RS-499 0265-0270	<5		<0.001		<0.5	<0.02
RS-499 0270-0275	<5		<0.001		<0.5	<0.02
RS-499 0275-0280	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-499 0280-0285	<5		<0.001		<0.5	<0.02
RS-499 0285-0290	23		<0.001		<0.5	<0.02
RS-499 0290-0295	<5		<0.001		<0.5	<0.02
RS-499 0295-0300	<5		<0.001		<0.5	<0.02
RS-499 0300-0305	<5		<0.001		<0.5	<0.02
RS-499 0305-0310	<5		<0.001		<0.5	<0.02
RS-499 0310-0315	<5		<0.001		<0.5	<0.02
RS-499 0315-0320	<5		<0.001		<0.5	<0.02
RS-499 0320-0325	<5		<0.001		<0.5	<0.02
RS-499 0325-0330	<5		<0.001		<0.5	<0.02
RS-499 0330-0335	<5		<0.001		<0.5	<0.02
RS-499 0335-0340	<5		<0.001		<0.5	<0.02
RS-499 0340-0345	<5		<0.001		<0.5	<0.02
RS-499 0345-0350	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-499 0350-0355	<5		<0.001		<0.5	<0.02
RS-499 0355-0360	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-499 0360-0365	<5		<0.001		<0.5	<0.02
RS-499 0365-0370	<5		<0.001		<0.5	<0.02
RS-499 0370-0375	<5		<0.001		0.5	<0.02

AMERICAN ASSAY LABORATORIES

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SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-499 0375-0380	<5		<0.001		3.8	0.11
RS-499 0380-0385	<5		<0.001		<0.5	<0.02
RS-499 0385-0390	<5		<0.001		<0.5	<0.02
RS-499 0390-0395	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-499 0395-0400	<5		<0.001		<0.5	<0.02
RS-499 0400-0405	<5		<0.001		<0.5	<0.02
RS-499 0405-0410	<5		<0.001		<0.5	<0.02
RS-499 0410-0415	<5		<0.001		<0.5	<0.02
RS-499 0415-0420	<5		<0.001		<0.5	<0.02
RS-499 0420-0425	<5		<0.001		<0.5	<0.02
RS-499 0425-0430	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-499 0430-0435	<5		<0.001		<0.5	<0.02
RS-499 0435-0440	<5		<0.001		<0.5	<0.02
RS-499 0440-0445	<5		<0.001		<0.5	<0.02
RS-499 0445-0450	<5		<0.001		<0.5	<0.02
RS-499 0450-0455	<5		<0.001		<0.5	<0.02
RS-499 0455-0460	<5		<0.001		<0.5	<0.02
RS-499 0460-0465	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-499 0465-0470	<5		<0.001		<0.5	<0.02
RS-499 0470-0475	<5		<0.001		<0.5	<0.02
RS-499 0475-0480	<5		<0.001		<0.5	<0.02
RS-499 0480-0485	<5		<0.001		<0.5	<0.02
RS-499 0485-0490	<5		<0.001		<0.5	<0.02
RS-499 0490-0495	<5		<0.001		<0.5	<0.02
RS-499 0495-0500	<5		<0.001		<0.5	<0.02

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP057428

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD
REFERENCE : RS-499

REPORTED : 23 MAY 2000

SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-499 0500-0505	<5		<0.001		<0.5	<0.02
RS-499 0505-0510	<5		<0.001		<0.5	<0.02
RS-499 0510-0515	<5		<0.001		<0.5	<0.02
RS-499 0515-0520	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-499 0520-0525	<5		<0.001		0.5	<0.02
RS-499 0525-0530	<5		<0.001		<0.5	<0.02
RS-499 0530-0535	<5		<0.001		<0.5	<0.02
RS-499 0535-0540	<5		<0.001		<0.5	<0.02
RS-499 0540-0545	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-499 0545-0550	<5		<0.001		<0.5	<0.02
RS-499 0550-0555	<5		<0.001		<0.5	<0.02
RS-499 0555-0560	<5		<0.001		<0.5	<0.02
RS-499 0560-0565	<5		<0.001		<0.5	<0.02
RS-499 0565-0570	<5		<0.001		<0.5	<0.02
RS-499 0570-0575	<5		<0.001		<0.5	<0.02
RS-499 0575-0580	<5		<0.001		<0.5	<0.02
RS-499 0580-0585	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-499 0585-0590	<5		<0.001		<0.5	<0.02
RS-499 0590-0595	<5		<0.001		<0.5	<0.02
RS-499 0595-0600	<5		<0.001		<0.5	<0.02
RS-499 0600-0605	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-499 0605-0610	<5		<0.001		<0.5	<0.02
RS-499 0610-0615	<5		<0.001		<0.5	<0.02
RS-499 0615-0620	<5		<0.001		<0.5	<0.02
RS-499 0620-0625	<5		<0.001		<0.5	<0.02

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP057428

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD
REFERENCE : RS-499

REPORTED : 23 MAY 2000

SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-499 0625-0630	<5		<0.001		<0.5	<0.02
RS-499 0630-0635	<5		<0.001		<0.5	<0.02
RS-499 0635-0640	<5		<0.001		<0.5	<0.02
RS-499 0640-0645	<5		<0.001		<0.5	<0.02
RS-499 0645-0650	<5		<0.001		<0.5	<0.02
RS-499 0650-0655	<5		<0.001		<0.5	<0.02
RS-499 0655-0660	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-499 0660-0665	<5		<0.001		<0.5	<0.02
RS-499 0665-0670	<5		<0.001		<0.5	<0.02
RS-499 0670-0675	<5		<0.001		<0.5	<0.02
RS-499 0675-0680	<5		<0.001		<0.5	<0.02
RS-499 0680-0685	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-499 0685-0690	<5		<0.001		<0.5	<0.02
RS-499 0690-0695	<5		<0.001		<0.5	<0.02
RS-499 0695-0700	8		<0.001		<0.5	<0.02
RS-499 0700-0705	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-499 0705-0710	<5		<0.001		<0.5	<0.02
RS-499 0710-0715	<5		<0.001		<0.5	<0.02
RS-499 0715-0720	<5		<0.001		<0.5	<0.02
RS-499 0720-0725	<5		<0.001		<0.5	<0.02
RS-499 0725-0730	<5		<0.001		<0.5	<0.02
RS-499 0730-0735	<5		<0.001		<0.5	<0.02
RS-499 0735-0740	<5		<0.001		<0.5	<0.02
RS-499 0740-0745	8	6	<0.001	<0.001	<0.5	<0.02
RS-499 0745-0750	<5		<0.001		<0.5	<0.02

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP057428

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD
REFERENCE : RS-499

REPORTED : 23 MAY 2000

SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-499 0750-0755	<5		<0.001		<0.5	<0.02
RS-499 0755-0760	<5		<0.001		<0.5	<0.02
RS-499 0760-0765	<5		<0.001		<0.5	<0.02
RS-499 0765-0770	<5		<0.001		<0.5	<0.02
RS-499 0770-0775	<5		<0.001		<0.5	<0.02
RS-499 0775-0780	<5		<0.001		<0.5	<0.02
RS-499 0780-0785	<5		<0.001		<0.5	<0.02
RS-499 0785-0790	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-499 0790-0795	<5		<0.001		<0.5	<0.02
RS-499 0795-0800	<5		<0.001		<0.5	<0.02
RS-499 0800-0805	<5		<0.001		<0.5	<0.02
RS-499 0805-0810	<5		<0.001		<0.5	<0.02
RS-499 0810-0815	<5		<0.001		<0.5	<0.02
RS-499 0815-0820	<5		<0.001		<0.5	<0.02
RS-499 0820-0825	<5		<0.001		<0.5	<0.02
RS-499 0825-0830	<5		<0.001		0.7	0.02
RS-499 0830-0835	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-499 0835-0840	<5		<0.001		0.6	<0.02
RS-499 0840-0845	<5		<0.001		<0.5	<0.02
RS-499 0845-0850	<5		<0.001		<0.5	<0.02
RS-499 0850-0855	<5		<0.001		<0.5	<0.02
RS-499 0855-0860	<5		<0.001		<0.5	<0.02
RS-499 0860-0865	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-499 0865-0870	<5		<0.001		<0.5	<0.02
RS-499 0870-0875	<5		<0.001		<0.5	<0.02

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP057428

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD
REFERENCE : RS-499

REPORTED : 23 MAY 2000

875 to 905
30'
C11574
262 ppb
5.8 ppm
6 T 252

SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-499 0875-0880	731	648	0.021	0.019	1.9	0.06
RS-499 0880-0885	49	42	0.001	0.001	2.3	0.07
RS-499 0885-0890	90		0.003		8.0	0.23
RS-499 0890-0895	404	330	0.012	0.010	8.6	0.25
RS-499 0895-0900	129		0.004		7.9	0.23
RS-499 0900-0905	171		0.005		6.5	0.19
RS-499 0905-0910	22		<0.001		2.6	0.08
RS-499 0910-0915	55		0.002		1.3	0.04
RS-499 0915-0920	26		<0.001		1.1	0.03
RS-499 0920-0925	29	26	<0.001	<0.001	1.2	0.04
RS-499 0925-0930	81	86	0.002	0.003	2.8	0.08
RS-499 0930-0935	23		<0.001		0.7	0.02
RS-499 0935-0940	36		0.001		1.0	0.03
RS-499 0940-0945	43		0.001		4.9	0.14
RS-499 0945-0950	47		0.001		7.7	0.22
RS-499 0950-0955	54		0.002		3.9	0.11
RS-499 0955-0960	57		0.002		4.6	0.13
RS-499 0960-0965	43	44	0.001	0.001	2.6	0.08
RS-499 0965-0970	42		0.001		2.8	0.08
RS-499 0970-0975	54		0.002		1.9	0.06
RS-499 0975-0980	98	106	0.003	0.003	3.0	0.09
RS-499 0980-0985	92		0.003		3.4	0.10
RS-499 0985-0990	27		<0.001		1.4	0.04
RS-499 0990-0995	10		<0.001		1.4	0.04
RS-499 0995-1000	145		0.004		2.8	0.08

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP057428

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD
REFERENCE : RS-499

REPORTED : 23 MAY 2000

SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-499 1000-1005	16		<0.001		1.5	0.04
RS-499 1005-1010	177		0.005		11.1	0.32
RS-499 1010-1015	333		0.010		2.3	0.07
RS-499 1015-1020	460	464	0.013	0.014	4.5	0.13
RS-499 1020-1025	154		0.004		2.0	0.06
RS-499 1025-1030	<5		<0.001		1.7	0.05
RS-499 1030-1035	168		0.005		2.0	0.06
RS-499 1035-1040	68		0.002		1.5	0.04
RS-499 1040-1045	56	62	0.002	0.002	2.1	0.06
RS-499 1045-1050	149	126	0.004	0.004	6.9	0.20
RS-499 1050-1055	52		0.002		1.5	0.04
RS-499 1055-1060	28		<0.001		2.0	0.06
RS-499 1060-1065	<5		<0.001		2.4	0.07
RS-499 1065-1070	<5		<0.001		2.0	0.06
RS-499 1070-1075	5		<0.001		0.7	0.02
RS-499 1075-1080	<5		<0.001		0.6	<0.02
RS-499 1080-1085	<5	<5	<0.001	<0.001	1.0	0.03
RS-499 1085-1090	21		<0.001		1.1	0.03
RS-499 1090-1095	58		0.002		2.7	0.08
RS-499 1095-1100	45		0.001		1.4	0.04
RS-499 1100-1105	56		0.002		1.9	0.06
RS-499 1105-1110	8		<0.001		1.5	0.04
RS-499 1110-1115	34		<0.001		1.3	0.04
RS-499 1115-1120	33		<0.001		1.6	0.05
RS-499 1120-1125	44		0.001		1.3	0.04

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP057428

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REFERENCE : RS-499

REPORTED : 23 MAY 2000

SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-499 1125-1130	51		0.001		0.8	0.02
RS-499 1130-1135	9		<0.001		1.5	0.04
RS-499 1135-1140	<5		<0.001		0.6	<0.02
RS-499 1140-1145	5	8	<0.001	<0.001	1.5	0.04
RS-499 1145-1150	<5		<0.001		<0.5	<0.02
RS-499 1150-1155	5		<0.001		0.8	0.02
RS-499 1155-1160	51	60	0.001	0.002	0.7	0.02
RS-499 1160-1165	11		<0.001		0.6	<0.02
RS-499 1165-1170	36	24	0.001	<0.001	2.1	0.06
RS-499 1170-1175	30		<0.001		1.6	0.05
RS-499 1175-1180	57		0.002		1.2	0.04
RS-499 1180-1185	106	130	0.003	0.004	1.1	0.03
RS-499 1185-1190	100		0.003		2.4	0.07
RS-499 1190-1195	36		0.001		1.7	0.05
RS-499 1195-1200	38		0.001		1.6	0.05
RS-499 1200-1205	80		0.002		0.7	0.02
RS-499 1205-1210	41		0.001		1.1	0.03
RS-499 1210-1215	20		<0.001		1.4	0.04
RS-499 1215-1220	39		0.001		1.9	0.06
RS-499 1220-1225	37		0.001		1.2	0.04
RS-499 1225-1230	183	184	0.005	0.005	2.6	0.08
RS-499 1230-1235	38		0.001		2.0	0.06
RS-499 1235-1240	<5		<0.001		1.5	0.04
RS-499 1240-1245	11		<0.001		1.2	0.04
RS-499 1245-1250	20		<0.001		0.6	<0.02

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP057428

CLIENT : HECLA MINING COMPANY
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REFERENCE : RS-499

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SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-499 1250-1255	22		<0.001		1.7	0.05
RS-499 1255-1260	26		<0.001		1.7	0.05
RS-499 1260-1265	6		<0.001		1.2	0.04
RS-499 1265-1270	10		<0.001		1.1	0.03
RS-499 1270-1275	6		<0.001		0.5	<0.02
RS-499 1275-1280	9		<0.001		0.6	<0.02
RS-499 1280-1285	51	56	0.001	0.002	0.9	0.03
RS-499 1285-1290	13		<0.001		1.0	0.03
RS-499 1290-1295	6		<0.001		1.0	0.03
RS-499 1295-1300	11	12	<0.001	<0.001	1.6	0.05
RS-499 1300-1305	113		0.003		3.7	0.11
RS-499 1305-1310	47		0.001		1.1	0.03
RS-499 1310-1315	75		0.002		1.7	0.05
RS-499 1315-1320	28		<0.001		2.4	0.07
RS-499 1320-1325	8		<0.001		1.2	0.04
RS-499 1325-1330	6		<0.001		0.7	0.02
RS-499 1330-1335	11		<0.001		1.1	0.03
34763	2018	2092	0.059	0.061	39.6	1.16

AMERICAN ASSAY LABORATORIES
1500 GLENDALE AVE
SPARKS, NV 89431
PHONE: (775) 356-0606
FAX: (775) 356-1413

CLIENT: HECLA MINING CO.
CLIENT REF: KURT ALLEN
AAL REF: SP57428
METHOD: AAL03-0

ELEMENT	Ag	Al	As	Au	B	Ba	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	Hg	K	La	Mg	Mn	Mo	Na	Ni	P	Pb	S	Sb	Sc	Se	Sr	Te	Th	Ti	Tl	U	V	W	Zn
SAMPLES	ppb	%	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppb	%	ppm	%	ppm	ppm	%	ppm	%	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm
RS-499 0000-0020	40	1.33	6	2.8	7	82.30	0.14	0.69	0.58	4.30	3.6	7.38	2.38	4.3	132	0.11	17.1	0.16	177	1.14	0.056	7.7	0.026	18.88	<.01	4.08	2.1	<.1	73.1	<.02	5.9	0.052	0.08	2.3	24	<.2	88.2
RS-499 0020-0040	42	1.1	4.2	11.9	3	125.30	0.12	0.34	0.69	5.10	2.6	5.87	2.28	3.8	125	0.09	17.1	0.11	103	1.22	0.035	5.2	0.038	16.3	<.01	7.04	3	0.5	105.1	0.02	6.3	0.011	0.06	1.8	24	<.2	52.1
RS-499 0040-0060	179	1.01	1.9	2.6	3	55.10	0.16	0.59	0.72	7.60	6.7	9.13	3.03	3.4	16	0.11	21.1	0.22	1388	1.31	0.046	14.2	0.103	16.53	0.01	2.72	3.4	<.1	37.3	<.02	4.7	0.031	0.07	1.9	36	<.2	146.6
RS-499 0060-0080	79	0.83	3.1	1.9	4	112.50	0.08	1.23	0.21	7.40	7.9	14.63	3.49	3.2	14	0.16	18.9	0.29	974	1.95	0.068	14.4	0.101	49.89	0.01	1.19	4.1	0.2	40.6	<.02	4.5	0.079	0.07	2	43	0.3	124.5
RS-499 0080-0100	73	0.97	2.0	1.6	3	80.60	0.25	1.48	0.23	5.70	7	8.27	3.26	3.6	8	0.16	17.5	0.37	987	1.7	0.06	11.7	0.088	9.34	<.01	1.72	4.1	0.1	47.2	<.02	4.3	0.072	0.07	2.1	44	0.2	100.4
RS-499 0100-0120	62	0.82	1.7	1.6	2	63.20	0.13	1.03	0.25	7.60	6.7	8.09	3.6	3.3	55	0.15	19.1	0.29	1219	1.7	0.069	34.1	0.092	8.59	0.02	3.11	4.1	<.1	42.4	<.02	5.1	0.064	0.06	2	41	0.2	160.1
RS-499 0120-0140	74	0.72	2.1	2.2	3	83.20	0.05	0.35	0.26	4.80	3.9	7.36	1.94	2.7	70	0.1	26.7	0.08	146	0.62	0.016	8.5	0.097	21.87	0.44	4.74	3	0.2	56	<.02	7.3	0.02	0.06	1.6	33	1.1	111.1
RS-499 0140-0160	111	0.73	1.3	1.3	<1	183.00	0.06	0.44	0.19	3.70	5.3	5.65	2.25	2.6	17	0.1	22.1	0.11	568	0.85	0.024	13.5	0.086	13.12	0.02	5.81	3.2	<.1	59.8	<.02	6.1	0.024	0.04	1.4	35	0.6	133.3
RS-499 0160-0180	200	0.73	21.8	12.8	3	75.10	0.07	0.89	0.28	10.20	6.1	7.38	3.86	2.8	709	0.11	20.7	0.15	1062	2.72	0.025	41.5	0.101	9.83	2.24	10.81	2.9	1.5	29.3	<.02	5.7	0.019	0.31	1.8	28	0.4	87.9
RS-499 0180-0200	68	0.67	1.4	1.5	<1	104.80	0.03	1.79	0.28	5.10	5.6	5.18	3	2.7	19	0.14	18.4	0.28	1025	1.46	0.045	24.7	0.085	7.11	0.05	2.38	2.8	0.1	51.8	<.02	4.5	0.045	0.07	2	38	<.2	94
RS-499 0200-0220	59	1.06	1.4	1.3	3	86.60	0.14	1.38	0.21	5.50	6	12.43	3.36	4.1	20	0.16	18.9	0.4	785	1.52	0.058	24.2	0.097	7.52	0.02	2.59	2.9	<.1	46.2	<.02	4.3	0.041	0.08	1.9	42	0.3	97.6
RS-499 0220-0240	65	0.9	1.1	1	3	68.80	0.05	1.21	0.17	8.40	5.9	7.13	3.33	3.5	9	0.15	17.3	0.56	823	1.51	0.055	18	0.087	5.39	<.01	0.88	2.7	<.1	37.4	<.02	3.7	0.05	0.06	1.7	42	<.2	95.2
RS-499 0240-0260	54	0.9	1.1	1.4	4	68.90	0.05	0.85	0.23	6.30	7.1	7.54	3.43	3.5	6	0.16	17.6	0.69	783	1.57	0.061	23.3	0.087	6.02	<.01	0.69	2.9	<.1	31	<.02	4	0.064	0.08	1.7	45	<.2	92.5
RS-499 0260-0280	44	0.82	1.2	1.1	<1	69.20	0.03	0.84	0.14	6.40	6.8	6.75	3.44	3.4	9	0.14	17.4	0.61	817	1.7	0.059	27.6	0.088	5.72	0.01	0.44	3	<.1	30.4	<.02	4	0.062	0.05	1.6	45	<.2	86.5
RS-499 0280-0300	43	0.97	1.1	1.6	2	47.10	0.04	1.28	0.2	6.30	4.9	5.56	3.13	3.8	8	0.13	18.1	0.58	693	1.26	0.053	13	0.088	7.8	0.02	0.76	2.8	<.1	36.6	<.02	4.3	0.037	0.04	1.6	45	<.2	83.9
RS-499 0300-0320	43	0.85	1.3	0.7	<1	47.30	0.03	1.32	0.18	6.20	6.3	8.17	3.3	3.4	<5	0.14	17.3	0.48	790	1.68	0.064	17.3	0.087	6.11	0.05	1.65	2.9	<.1	35.5	<.02	3.9	0.054	0.05	1.8	44	<.2	92.4
RS-499 0320-0340	53	0.87	1.0	0.8	<1	53.10	0.04	1.4	0.21	5.90	5.2	6.65	2.99	3.6	<5	0.16	17.8	0.44	876	1.37	0.058	10	0.088	9.51	0.02	0.8	2.7	<.1	39.5	<.02	4.1	0.047	0.05	1.8	41	<.2	88.8
RS-499 0340-0360	48	0.84	1.0	1.4	2	52.80	0.03	1.43	0.2	6.20	5.6	6.53	3.07	3.5	6	0.15	17.9	0.49	762	1.52	0.072	19.3	0.089	7.14	0.01	0.91	2.8	<.1	37	<.02	4	0.06	0.05	1.8	43	<.2	92
RS-499 0360-0380	162	1.06	1.0	1.3	2	66.70	0.07	1.18	0.16	6.00	6	5.79	3.03	4	8	0.16	17.4	0.68	765	1.58	0.069	13.2	0.082	19.3	0.01	0.66	2.9	<.1	39.5	<.02	4.2	0.048	0.05	1.7	41	<.2	86.8
RS-499 0380-0400	123	0.93	1.1	1.3	4	66.50	0.04	1.07	0.2	6.20	8.5	10.99	3.32	3.7	13	0.16	16.8	0.68	722	1.87	0.083	20.5	0.085	11.24	0.01	0.56	3.2	<.1	36.2	<.02	4	0.076	0.05	1.6	45	<.2	93.6
RS-499 0400-0420	84	1.05	0.9	1.9	2	64.70	0.03	1.65	0.18	5.90	7.2	5.6	2.94	4.4	7	0.13	18.2	0.41	1036	1.44	0.052	8.2	0.09	9.13	0.02	1.63	2.9	<.1	46.1	<.02	5.1	0.052	0.05	1.9	38	<.2	90.8
RS-499 0420-0440	92	1.23	1.5	1.1	3	75.30	0.05	1.28	0.17	6.50	9	8.76	3.83	4.7	12	0.17	17.8	0.68	1162	2.3	0.064	47.9	0.085	8	0.01	0.4	3.2	<.1	42.5	<.02	4.7	0.078	0.05	1.9	44	<.2	94.1
RS-499 0440-0460	74	1.06	1.1	0.9	2	58.20	0.04	1.45	0.19	5.90	6.1	6.59	3.17	4.1	10	0.13	18.1	0.36	1091	1.7	0.054	27.7	0.084	8.3	0.03	1.46	2.8	<.1	48.7	<.02	5.2	0.06	0.04	1.7	37	<.2	90.1
RS-499 0460-0480	111	0.98	1.1	0.9	1	85.00	0.03	1.55	0.16	4.80	6.1	6.83	2.9	4.2	9	0.13	16.7	0.23	988	2.09	0.064	24.4	0.073	5.85	0.03	1.46	2.5	<.1	54.8	<.02	5.8	0.07	0.05	1.7	26	<.2	85.6
RS-499 0480-0500	68	0.88	1.8	1.3	<1	46.40	0.02	1.13	0.09	3.10	5.1	5.55	2.64	4	27	0.11	14.5	0.17	698	2.01	0.055	24	0.057	5.38	0.49	0.76	1.5	<.1	52.9	<.02	7	0.051	0.05	1.7	11	0.3	83
RS-499 0500-0520	38	0.91	1.5	1.1	<1	47.90	0.04	1.28	0.11	1.70	3.4	3.58	2.38	4.1	14	0.11	13.9	0.19	796	1.09	0.05	16.1	0.059	6.35	0.15	0.61	1.4	<.1	57.9	<.02	7.2	0.026	0.05	1.3	8	0.2	70.9
RS-499 0520-0540	89	0.92	1.6	1.3	1	61.70	0.04	0.96	0.09	2.40	5.4	6.8	2.56	4.8	9	0.14	13.9	0.22	780	1.42	0.065	18.6	0.05	4.82	0.02	0.47	1.5	<.1	54.5	<.02	8.2	0.041	0.05	1.4	9	0.3	79.4
RS-499 0540-0560	54	0.98	4.1	3.2	3	65.20	0.02	1.03	0.15	2.50	3.9	4.79	2.59	5.9	6	0.16	15.4	0.25	1080	1.31	0.078	15.9	0.049	8.41	0.01	0.35	1.8	<.1	62.1	<.02	8.7	0.05	0.06	1	7	0.3	78.7
RS-499 0560-0580	47	0.9	3.3	2.2	3	63.10	0.02	0.88	0.16	2.80	4.3	4.95	2.82	5.3	6	0.17	14.1	0.24	893	1.23	0.081	27.1	0.049	11.4	0.01	0.35	1.7	<.1	57	<.02	8.7	0.048	0.06	0.8	8	0.2	80.9
RS-499 0580-0600	45	0.86	2	1.3	3.0	63.00	0.1	0.66	0.08	2.70	7.5	7.21	3.31	4.9	<5	0.23	15.5	0.22	643	2.09	0.083	63.5	0.047	5.12	<.01	0.36	1.6	<.1	51.2	<.02	9.5	0.063	0.1	1.1	9	0.2	85.6
RS-499 0600-0620	86	0.98	2.9	1.3	6	92.9	0.14	0.73	0.12	2.8	10.8	13	4.47	6.7	11	0.33	17.5	0.22	936	2.94	0.126	146.3	0.046	5.9	<.01	0.32	2	<.1	47.8	<.02	10.8	0.076	0.12	1.5	13	0.3	90.4
RS-499 0620-0640	73	0.78	4.6	1.4	2	96.6	0.15	0.48	0.1	2.8	7.4	9.44	3.02	5	23	0.24	19.2	0.12	603	1.79	0.129	56.4	0.039	14.74	<.01	0.44	1.5	<.1	46.9	<.02	10.1	0.056	0.07	1.1	12	0.4	80.9
RS-499 0640-0660	59	0.95	4.2	1.1	5	79.2	0.03	0.5	0.08	2.1	3.3	6.08	2.71	6	7	0.2	20.6	0.14	421	0.67	0.103	16.3	0.023	11	<.01	0.5	1.5	<.1	67	<.02	6.8	0.033	0.06	1.2	10	0.4	88.9
RS-499 0660-0680	161	0.91	2.7	0.9	3	94.5	0.04	0.52	0.07	2.3	3.8	5.89	2.53	5.8	8	0.25	20.2	0.12	580	1.18	0.117	18.8	0.033	12.03	<.01	0.45	1.3	<.1	54.1	<.02	8.9	0.052	0.08	1.3	9	0.5	92.9
STANDARD DS2	273	1.72	58.9	242.8	3	149.8	10.9	0.53	10.54	11.5	169.5	127.68	3.08	6.2	237	0.16	16.3	0.61	840	13.99	0.032	35.6	0.091	33.21	<.01	8.81	2.7	2.2	28.5	1.83	3.6	0.085	1.81	17.5	74	6.8	162

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CLIENT REF: KURT ALLEN
AAL REF: SP57428
METHOD: AAL03-0

ELEMENT	Ag	Al	As	Au	B	Ba	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	Hg	K	La	Mg	Mn	Mo	Na	Ni	P	Pb	S	Sb	Sc	Se	Sr	Te	Th	Tl	Tl	U	V	W	Zn
SAMPLES	ppb	%	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppb	%	ppm	%	ppm	ppm	%	ppm	%	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm
RS-499 0680-0700	122	0.74	2.2	1.6	2	130.3	0.07	0.41	0.15	2.5	5.6	8.58	2.79	4.7	24	0.24	16.9	0.11	684	1.74	0.135	34.1	0.034	11.09	< .01	0.65	1.2	< .1	44.2	< .02	6.9	0.064	0.09	2	10	0.9	78.8
RS-499 0700-0720	139	1.36	1.7	1.2	3	318.4	0.11	0.65	0.14	2.5	6.9	7.47	2.66	5.5	35	0.22	19.8	0.33	539	1.83	0.127	28.5	0.038	11.04	< .01	0.28	1.5	0.2	141.7	< .02	5.8	0.051	0.1	2	14	0.3	75.6
RS-499 0720-0740	78	1.6	1.8	0.6	5	110	0.25	0.9	0.12	2.2	4.2	4.42	2.59	5.9	13	0.27	24.1	0.33	567	1.25	0.104	19.8	0.03	9.88	< .01	0.25	1.6	< .1	163.4	< .02	7.3	0.026	0.13	1.1	10	< .2	80.4
RS-499 0740-0760	67	1.37	2	0.9	3	79.5	0.34	1.21	0.17	1.8	4.6	5.13	2.4	5.2	<5	0.26	21.4	0.24	785	1.51	0.078	20.8	0.035	10.7	< .01	0.34	1.2	< .1	132.1	< .02	7.3	0.017	0.13	2.1	7	< .2	81.8
RS-499 0760-0780	88	1.65	1.1	0.5	1	77.4	0.39	1.56	0.84	2.3	4.7	3.34	2.03	5.8	15	0.27	24.3	0.28	826	1	0.067	16.8	0.042	10.69	< .01	0.17	1.2	< .1	175.2	0.02	7.2	0.006	0.11	2.5	8	< .2	71.4
RS-499 0780-0800	126	1.48	1.2	0.2	1	96.4	0.25	1.62	0.12	1.9	4.9	4.84	2.22	5.3	<5	0.27	27	0.21	1034	1.25	0.067	23.6	0.044	12.03	< .01	0.21	1	< .1	144.4	0.02	7.6	0.004	0.09	1.5	6	< .2	58.2
RS-499 0800-0820	85	1.91	1.2	0.5	2	78.5	0.14	1.86	0.22	1.7	2.3	2.48	1.84	6.4	<5	0.3	28.7	0.26	934	0.68	0.06	15.4	0.042	11.11	< .01	0.1	1	< .1	196.4	0.02	7.4	0.001	0.1	1.9	5	< .2	58.7
RS-499 0820-0840	109	1.39	1.2	0.2	2	100	0.24	1.46	0.23	1.5	5.4	4.22	2.06	5.4	8	0.31	27.9	0.17	793	1.17	0.073	19.2	0.04	12.7	< .01	0.27	0.9	< .1	126.4	< .02	7.6	0.008	0.1	1.4	4	0.2	60.7
RS-499 0840-0860	117	1.29	1.3	0.7	1	281.7	0.3	1.64	0.11	1.6	4.1	5.62	2.21	6	155	0.39	22.6	0.13	625	1.46	0.068	14.3	0.044	12.55	0.03	0.34	0.8	< .1	93.6	< .02	7	0.035	0.11	1.3	4	0.5	77
RS-499 0860-0880	971	1.53	3.4	489.9	2	245.1	0.29	3.57	0.35	1.9	1.8	3.23	2.17	4.8	195	0.34	26.4	0.12	1145	1.33	0.023	3	0.053	22.43	0.47	0.95	0.6	1.8	150.8	< .02	8	0.007	0.14	1.3	3	0.2	68.6
RS-499 0880-0900	6832	0.71	27.8	183.1	1	47.4	0.15	0.36	0.25	0.2	4.3	5.17	2.17	2.4	120	0.29	25.2	0.03	708	1.32	0.013	18.7	0.011	34	2.34	6.46	0.3	16.2	36.9	< .02	7.6	< .001	0.23	1	2	0.2	81.5
RS-499 0900-0920	2281	0.69	14	37.6	1	84.8	0.06	0.28	0.27	< .1	3.2	3.42	2.2	2.5	175	0.33	28.8	0.02	1278	2.91	0.013	16.9	0.007	33.25	2.43	3.34	0.4	8.8	32.1	< .02	8.1	< .001	0.45	0.9	2	0.2	89.7
RS-499 0920-0940	716	0.78	6.2	25.9	1	46.7	0.11	0.21	0.28	< .1	4.3	4.19	2.42	2.5	161	0.41	27.6	0.02	506	3.33	0.012	17.6	0.007	31.24	2.68	4.08	0.4	4.3	27.9	0.02	8.4	0.002	0.64	0.9	< 2	0.2	89.6
RS-499 0940-0960	3665	0.73	34.8	40.5	< 1	40.6	0.19	0.18	0.27	< .1	4.7	4.34	2.38	2.3	129	0.33	26.3	0.02	164	1.49	0.01	20.4	0.005	35.08	2.7	6.13	0.3	20.7	22.6	< .02	8.5	< .001	0.27	0.9	< 2	0.4	84.2
RS-499 0960-0980	2102	0.68	29.5	47.7	< 1	28.9	0.17	0.22	0.2	0.1	4.8	5.61	2.17	2.2	122	0.31	25	0.02	153	2.03	0.01	29.1	0.006	32.61	2.04	5.15	0.4	14.4	24.8	< .02	8.1	< .001	0.28	0.9	2	0.2	74.6
RS-499 0980-1000	1419	0.62	20.8	21.8	1	20.5	0.08	0.17	0.14	0.1	5.6	4.78	1.82	1.8	96	0.31	23.8	0.02	312	3.73	0.01	29.8	0.006	27.24	1.62	3.95	0.4	8.1	19.2	< .02	8.4	< .001	0.25	1.4	2	0.2	71.9
RS-499 1000-1020	2296	0.63	19.3	213.8	1	47.8	0.09	0.63	0.15	0.2	6.4	5.34	2.04	2.3	92	0.31	30.2	0.03	545	2.02	0.021	22.1	0.007	36.61	1.69	3.09	0.5	7.5	37	< .02	10.1	< .001	0.27	1.1	2	0.3	82.8
RS-499 1020-1040	2046	0.57	17.7	43.6	< 1	30	0.08	0.58	0.43	0.1	6.7	6.02	2.08	2.4	93	0.29	33.5	0.03	372	2.27	0.033	32.4	0.007	44.64	1.41	2.54	0.6	7.1	42.1	< .02	11.4	0.001	0.19	1.2	2	0.3	82.2
RS-499 1040-1060	1914	0.68	18	18.9	< 1	26.3	0.07	0.45	0.19	< .1	9.3	6.1	2.04	2.9	83	0.31	35.5	0.02	365	2.66	0.035	28.8	0.007	28.11	1.39	2.92	0.5	7.7	33.5	< .02	11.8	0.001	0.19	1.1	2	0.2	86.8
RS-499 1060-1080	920	0.92	11.4	5	2	30.6	0.07	0.64	0.81	0.1	10.1	8.2	2.45	4.1	56	0.4	37.7	0.03	757	3.9	0.045	82.9	0.067	17.44	0.74	1.78	0.6	3.9	35.3	< .02	12.8	< .001	0.18	1.9	4	0.2	77.9
RS-499 1080-1100	1148	0.94	10.3	13.1	< 1	39.7	0.08	0.36	0.33	< .1	7.1	6.01	2.27	3.7	68	0.47	41.1	0.02	737	3.11	0.024	58.9	0.007	23.22	1.61	5.45	0.5	7.9	30.9	< .02	14.4	< .001	0.36	1.8	2	0.3	78.8
RS-499 1100-1120	1018	0.88	11.6	21.5	2	39.8	0.06	0.23	0.19	< .1	6.7	5.48	2.06	3.1	58	0.43	38.8	0.03	454	2.95	0.021	44.2	0.006	22.28	1.68	4.34	0.4	5.7	29	< .02	13.8	< .001	0.28	1.6	2	0.3	74.4
RS-499 1120-1140	747	0.83	7.6	25.5	< 1	38	0.05	0.3	0.16	< .1	4.1	4.36	1.77	2.7	83	0.38	37.9	0.03	814	2.57	0.03	28.6	0.006	25.02	1.53	4.62	0.4	4.1	34.6	< .02	14.5	< .001	0.32	2.3	2	0.2	77.1
RS-499 1140-1160	502	0.82	6.1	6.2	1	49.1	0.05	1.04	0.2	0.1	4.1	5.32	1.51	3.3	49	0.4	42.7	0.02	958	2.18	0.031	34.2	0.007	18.21	0.57	1.32	0.6	1.9	52.2	< .02	14.6	< .001	0.14	3.4	2	< .2	77.7
RS-499 1160-1180	907	0.72	8.8	13.6	2	78.3	0.04	0.33	0.14	< .1	5.7	5.16	1.64	2.5	68	0.36	40.7	0.02	334	2.61	0.027	33.8	0.006	20.56	1.35	4.54	0.3	4.5	32.7	< .02	14.7	0.001	0.27	3.2	< 2	0.3	70.8
RS-499 1180-1200	1172	0.74	15.8	24.7	1	34.4	0.04	0.19	0.15	< .1	7.1	5.46	1.85	2.7	114	0.35	38.7	0.02	432	2.69	0.021	40.5	0.006	22.02	1.49	5.6	0.4	7.7	29.9	< .02	13.8	< .001	0.36	2.1	2	0.3	72.7
RS-499 1200-1220	738	0.76	10.6	28.7	1	42.7	0.05	0.18	0.13	< .1	5.3	8.39	1.9	2.8	58	0.35	38.8	0.01	690	2.78	0.024	38.7	0.006	22.06	1.65	5.96	0.4	5.3	29.6	< .02	13.8	< .001	0.28	2	< 2	0.3	77.5
RS-499 1220-1240	1069	0.68	14	24.4	1	27.8	0.04	0.21	0.26	0.1	6.8	5.02	1.95	2.2	75	0.3	38.6	0.02	417	2.82	0.02	27.7	0.006	23.4	1.7	5.34	0.3	6.8	35.5	< .02	13.4	< .001	0.31	3.8	< 2	0.4	75.9
RS-499 1240-1260	888	0.88	12.1	15	< 1	51.8	0.04	0.25	0.35	0.1	6.7	5.21	1.81	3.1	94	0.4	41.2	0.02	407	2.56	0.021	31.4	0.006	22	1.52	4.34	0.5	4.7	35.6	< .02	14.1	0.002	0.32	2.5	2	0.3	88.7
RS-499 1260-1280	538	0.77	7.6	5.6	2	42.4	0.05	0.43	0.13	0.1	8.7	6.38	2.13	3.1	47	0.4	43.3	0.02	619	3.66	0.034	59.8	0.007	17.11	1.24	3.2	0.6	2.2	35.1	< .02	15	< .001	0.34	1.7	3	0.3	75.6
RS-499 1280-1300	799	0.82	8.9	7.4	1	42.6	0.04	0.28	0.14	0.1	6.5	6.15	1.92	3.4	96	0.41	43.1	0.02	360	3.37	0.033	48.5	0.006	20.11	1.41	2.53	0.6	3.3	36.3	< .02	14.9	< .001	0.26	1.7	2	0.3	80.4
RS-499 1300-1320	1399	0.67	17.8	68	1	40.6	0.12	0.41	0.16	0.1	7.4	6.55	2.16	2.4	82	0.31	35.6	0.02	494	2.46	0.03	51.1	0.006	22.34	1.41	2.96	0.5	7	44.7	< .02	11.5	< .001	0.19	1.2	2	0.3	76.4
RS-499 1320-1335	876	0.67	10.1	7.8	1	57	0.03	0.88	0.18	0.1	9.6	6.36	1.78	2.9	58	0.28	40.5	0.06	742	3.6	0.057	30.6	0.006	19.48	0.53	1.46	0.8	3.3	60	< .02	13.3	< .001	0.13	2.8	2	0.2	73.9
34763	32458	0.85	61.7	2436.9	< 1	79.8	0.6	0.82	0.2	2.5	22.5	11.62	1.76	2.4	200	0.35	17	0.09	239	8.33	0.027	11.1	0.059	20.6	2.02	10.65	0.4	18.2	77.1	0.03	3.3	< .001	0.3	0.8	3	0.3	75.7
STANDARD DS2	271	1.69	57.2	198.9	3	147.5	10.54	0.53	10	11.3	159.9	127.33	3.02	6.1	221	0.15	15.8	0.59	823	13.72	0.032	36.1	0.089	32.5	< .01	8.38	2.7	2.2	28.6	1.76	3.5	0.093	1.77	17.9	73	6.5	159

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CLIENT: HECLA MINING CO.
CLIENT REF: KURT ALLEN
AAL REF: SP67388
METHOD: AAL03-0

ELEMENT	Ag	Al	As	Au	B	Ba	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	Hg	K	La	Mg	Mn	Mo	Na	Ni	P	Pb	S	Sb	Sc	Se	Sr	Te	Th	Ti	Tl	U	V	W	Zn
SAMPLES	ppb	%	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppb	%	ppm	%	ppm	ppm	%	ppm	%	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm
RS-495-00 1290-1310	86	0.86	2.7	0.5	5	77.90	0.13	0.93	0.28	2.00	4	6.39	2.87	7.4	13	0.27	27.4	0.21	1029	2.6	0.118	7.5	0.039	13.35	0.01	0.22	1.3	0.1	21.8	<.02	8.4	0.068	0.02	1.6	2	0.4	103.4
RS-495-00 1340-1360	35	1.09	7	0.5	4	68.30	0.06	0.65	0.11	2.10	3.9	7.07	2.68	7.3	13	0.16	24.6	0.3	723	1.78	0.125	6.4	0.038	8.62	<.01	0.23	1.7	<.1	35.9	<.02	8	0.023	0.02	0.8	<2	<.2	78.4
RS-495-00 1390-1410	69	0.8	2.7	1	5	52.60	0.14	0.3	0.16	2.60	5.8	12.16	3.28	6.6	14	0.25	22.9	0.18	769	3.19	0.065	13.3	0.049	11.38	<.01	0.18	1.3	0.2	16.5	<.02	9.3	0.069	0.03	1	3	0.4	96.8
RS-495-00 1440-1460	101	0.72	2.5	1.1	1	63.00	0.07	0.47	0.06	2.40	7.9	13.89	3.73	6.8	5	0.24	18.4	0.07	1250	4.12	0.069	16.3	0.04	8.66	<.01	0.25	1.6	0.2	14.7	<.02	11	0.091	<.02	1.3	3	0.4	89.9
RS-495-00 1490-1510	86	0.41	2.3	1	3	63.40	0.09	0.23	0.1	1.20	8.3	12.46	3.44	4	7	0.2	14.5	0.03	673	3.98	0.104	25.6	0.036	5.76	<.01	0.22	1.1	0.2	12.6	<.02	10.7	0.091	<.02	1.3	4	0.3	65.7
RS-495-00 1540-1560	76	0.64	3.2	0.9	2	76.70	0.09	0.21	0.05	2.40	10.4	12.06	3.89	6.9	5	0.27	21	0.09	1018	4.95	0.128	18.8	0.038	7.52	<.01	0.24	1.6	0.2	20.8	<.02	11.4	0.069	<.02	1	4	0.5	101.3
RS-495-00 1590-1610	95	0.83	3.9	1.4	2	54.60	0.04	0.84	0.13	2.70	8.1	9.91	4.22	7.1	7	0.26	23.5	0.1	1492	4.29	0.069	23.6	0.045	12.63	<.01	0.33	1.6	0.2	47.7	<.02	12.6	0.096	<.02	1.4	4	1.1	101.6
RS-495-00 1640-1660	94	1.41	4.0	0.9	<1	54.90	0.03	0.78	0.16	2.70	6.3	8.31	3.71	11.4	5	0.3	27.6	0.11	1328	4.05	0.102	12	0.049	18.75	<.01	0.71	1.6	0.2	77.6	<.02	12	0.09	<.02	1.4	2	0.8	102.5
RS-495-00 1690-1710	57	0.76	1.8	0.7	1	62.40	<.02	0.43	0.1	2.40	7	10.95	4.3	9.4	<5	0.18	19.1	0.21	1004	3.69	0.097	22.8	0.044	11.08	0.01	0.75	2.2	0.2	30.4	<.02	11.3	0.074	<.02	1.6	3	0.2	89.6
RS-495-00 1740-1764	131	1.13	30.4	0.4	<1	40.20	0.22	1.03	0.27	7.70	4.1	15.87	3.86	6.7	11	0.11	25.3	0.26	1681	4.35	0.064	7.1	0.142	11.46	0.01	1.04	3.7	0.3	190.2	<.02	6.8	0.17	<.02	1.4	22	0.2	134.5
RS-495-00 1790-1810	105	0.7	1.5	1.5	<1	58.10	0.09	0.39	0.2	2.60	9.4	14.26	4.51	8.5	<5	0.15	22.8	0.2	1060	4.52	0.103	28.4	0.045	6.07	0.01	0.94	2.3	0.3	32.3	<.02	12.1	0.054	<.02	1.7	4	<.2	105.2
RS-495-00 1840-1860	109	1.02	1.3	0.8	2	76.20	0.13	0.87	0.15	2.40	6.7	10.73	4.17	7.5	35	0.29	23.6	0.12	1449	3.86	0.09	19.8	0.042	12.04	<.01	1.6	1.5	0.2	69.1	0.02	10.9	0.02	0.03	1.3	4	<.2	97.1
RS-495-00 1875-1895	105	1.13	1.3	0.6	1	63.60	<.02	1.21	0.11	1.60	4.7	8.28	3.29	7.4	34	0.41	30	0.11	1065	5.85	0.074	15.3	0.033	16.13	0.07	0.98	1.2	0.2	78	<.02	10.9	0.008	0.07	1.2	<2	<.2	97.1
RS-495-00 1897-1898	814	1.21	10.8	9.4	1	29.60	0.06	0.41	0.2	1.60	1	5.42	2.07	6.1	127	0.41	26.7	0.07	456	32.25	0.052	3	0.072	37.22	0.39	3.09	0.9	1.9	134.9	<.02	8.3	<.001	0.14	1.5	<2	0.3	105.6
RS-495-00 1920-1920	196	1.30	3.3	0.9	1	73.60	0.02	1.16	0.09	2.30	3.3	4.97	3.08	8.3	44	0.44	34.6	0.08	1991	2.87	0.073	6.8	0.034	21.91	0.11	0.77	1.3	0.2	90	<.02	10.7	0.004	0.06	0.7	<2	<.2	104
RS-495-00 1929-1933	170	1.2	3.2	0.7	2	59.10	<.02	1.38	0.08	2.60	3	3.14	3.15	8.1	23	0.41	33.7	0.09	1134	2.02	0.063	3.6	0.033	19.59	0.04	0.5	1.4	0.2	109.4	<.02	10.3	0.01	0.05	0.7	<2	<.2	105.4
RS-495-00 1933-1962	236	1.03	2.9	0.4	<1	58.50	<.02	1.82	0.08	2.40	1.8	3.91	2.96	7.5	14	0.39	35.3	0.07	1105	1.67	0.063	3.4	0.032	25.46	0.03	0.47	1.4	0.2	95.7	<.02	10.2	0.011	0.06	0.7	<2	0.4	114.2
RS-495-00 1962-1970	125	0.78	0.8	1.3	2	70.10	0.03	1.6	0.06	1.40	5.1	5.48	2.83	6.6	17	0.4	36.8	0.06	1130	1.79	0.074	7	0.035	20.05	0.01	0.42	1.2	0.2	78.6	0.02	9.2	0.019	0.04	0.7	<2	0.6	84.8
RS-495-00 1970-2000	85	0.89	1.1	1.2	2	74.60	0.02	0.7	0.16	1.10	2.8	3.83	2.46	7.5	14	0.38	36.9	0.06	674	0.88	0.07	4.4	0.036	24.16	<.01	0.33	1	0.2	62.5	<.02	10.1	0.014	0.03	0.6	<2	0.6	91.5
RS-495-00 2000-2040	78	0.96	1.9	1.1	5	67.50	0.13	1.03	0.23	1.00	3.2	4.42	2.61	6.5	12	0.35	34.7	0.09	743	0.82	0.071	4	0.026	20.78	0.01	0.32	0.6	0.1	76.9	<.02	6.7	0.019	0.06	0.5	<2	0.3	87.2
RS-495-00 2040-2070	138	0.91	10.9	0.6	3	77.40	0.16	0.93	0.27	1.90	4.1	4.09	2.68	6.2	17	0.38	39.2	0.06	410	1.89	0.096	4.1	0.027	23.7	0.09	0.56	0.4	<.1	69	<.02	6.2	0.007	0.13	0.6	<2	<.2	74.6
RS-495-00 2070.0-2074.7	73	0.78	3.1	0.4	2	100.60	0.23	2.81	0.27	1.00	5.6	6.43	2.01	4.4	10	0.4	25	0.04	1468	1.63	0.094	10.9	0.031	14.63	0.04	0.32	0.4	0.1	75.2	<.02	4.2	0.008	0.08	0.5	2	<.2	46.1
RS-495-00 2074.7-2080.0	124	1.76	1.1	<.2	<1	101.50	0.8	1.48	0.34	1.20	2.6	5.05	2.05	6.4	18	0.73	34.1	0.18	660	0.69	0.075	6	0.037	21.44	0.02	0.26	0.7	0.1	220.7	0.02	4	0.002	0.19	0.7	<2	<.2	71.9
RS-495-00 2080-2105	114	2.12	1	<.2	2	64.10	0.62	2.12	0.36	1.60	2.3	6.44	2.17	7.3	17	0.76	38.2	0.18	672	3.87	0.071	3	0.039	24.24	0.01	0.31	0.7	<.1	334.2	0.02	3.9	0.001	0.22	0.6	<2	<.2	82.5
RS-495-00 2105-2115	143	1.28	2.0	0.7	<1	100.60	0.24	2.6	0.54	6.20	4.1	9.19	3.13	9.1	23	0.39	27.6	0.08	2612	2.28	0.109	13.5	0.067	18.93	0.02	1.47	1.2	0.2	123	<.02	5	0.014	0.13	0.8	7	<.2	145.4
RS-495-00 2115-2135	130	1.55	0.7	0.7	<1	81.30	0.04	1.28	0.28	6.00	5.7	14.46	4.17	11.9	11	0.45	34.4	0.08	2440	2.38	0.084	11.6	0.129	21.2	0.04	0.76	3.1	0.3	76.9	<.02	7.6	0.061	0.06	1	17	<.2	119.6
RS-495-00 2135-2137	359	1.64	4.5	1.6	<1	59.10	0.02	0.84	0.3	7.80	4.8	12.43	3.99	11	32	0.38	36	0.07	1772	2.11	0.067	10.2	0.133	21.06	0.19	1.36	2.8	0.8	70.7	<.02	7.9	0.005	0.02	0.7	13	<.2	128.8
RS-495-00 2137.0-2148.3	176	1.6	3.3	16.9	1	68.60	0.02	1.83	0.24	8.70	3.6	14.45	4.29	10.7	6	0.44	34.4	0.08	3168	2.24	0.076	9.9	0.136	20.88	0.14	0.8	3.2	0.6	99.3	<.02	7.9	0.038	0.07	1	16	<.2	130.4
RS-495-00 2148.3-2150.3	1377	1.27	14.2	256.5	2	47.70	0.02	0.87	0.26	6.30	2.3	12.83	6.77	8.4	41	0.34	23.2	0.06	1685	2.06	0.063	7.1	0.134	23.58	5.16	4.74	2.2	15	72.1	<.02	5.7	0.003	0.32	0.7	10	<.2	151.3
RS-495-00 2150.3-2166.0	142	1.67	1.1	13.2	<1	55.40	0.0	1.97	0.22	6.90	5.4	12.31	4.64	11.2	7	0.39	34	0.09	2964	2.03	0.088	8.7	0.133	18.71	0.04	0.56	3.4	0.4	118.4	<.02	8.2	0.037	0.03	0.9	16	<.2	127.5
RS-495-00 2166-2187	157	1.51	0.7	3	1	49.9	0.02	1.55	0.26	5.9	4.3	12.38	4.5	10.1	<5	0.35	33.1	0.07	2038	1.69	0.064	10.9	0.135	19.18	0.06	0.55	3.1	0.5	80.6	<.02	8.3	0.035	<.02	0.9	15	<.2	125
RS-495-00 2187-2189	560	1.52	12	6.5	<1	52.6	0.02	1.14	0.2	4.6	0.9	10.93	4.18	9.1	54	0.52	26.6	0.05	1373	1.49	0.049	5.2	0.138	22.96	2.14	4.3	2.3	4.4	113.8	<.02	6.7	0.006	0.23	0.8	9	<.2	130.6
RS-495-00 2189-2215	138	1.67	0.9	1.6	2	63.4	0.02	1.9	0.22	5	4	12.19	4.02	9.9	28	0.45	35.6	0.07	2324	1.53	0.052	6.8	0.134	20.69	0.08	0.87	3.1	0.4	103.5	<.02	9	0.005	0.03	0.8	12	<.2	133
STANDARD DS2	267	1.73	57.6	211.5	3	145.7	10.58	0.57	10.73	12.1	152	122.7	3.15	6.2	268	0.16	15.7	0.62	849	14.37	0.031	37.2	0.093	32.16	0.03	8	2.7	2.5	31	1.94	3.5	0.098	1.79	19.4	76	6.6	169.2
RS-495-00 2216-2220	293	1.98	2.7	2.6	8	82.5	0.03	2.23	0.28	6.7	4.2	11.49	3.95	11.6	60	0.54	37	0.07	2438	1.62	0.052	4.6	0.144	23.68	0.28	1.79	3.3	0.4	138.8	<.02	9.2	0.005	0.17	0.9	14	<.2	113

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AAL REF: SP67388
METHOD: AAL03-0

ELEMENT	Ag	Al	As	Au	B	Ba	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	Hg	K	La	Mg	Mn	Mo	Na	Ni	P	Pb	S	Sb	Sc	Se	Sr	Te	Th	Ti	Tl	U	V	W	Zn
SAMPLES	ppb	%	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppb	%	ppm	%	ppm	ppm	%	ppm	%	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm
RS-495-00 2220-2240	152	1.82	0.8	0.7	5	58.8	0.02	1.43	0.22	8	5	11.95	4.01	10.3	18	0.49	36.8	0.09	1509	1.38	0.053	6.2	0.142	23.9	0.07	0.77	3.3	0.1	99.8	<.02	8.1	0.005	0.13	0.8	13	<.2	119.1
RS-495-00 2240-2260	179	1.92	0.5	0.9	5	64.2	0.02	3.36	0.28	7.3	3.6	11.82	4.14	11.7	18	0.82	37.2	0.11	2222	7.73	0.069	5.9	0.125	23.21	0.07	1.03	3.5	<.1	140.1	<.02	8.7	0.021	0.16	0.8	15	<.2	117.3
RS-495-00 2260.0-2267.8	469	1.64	1.5	44.9	3	59.4	0.03	1.06	0.26	5.5	2.8	11.58	3.38	9	18	0.54	36.9	0.08	1438	2.26	0.057	5.3	0.134	23.68	0.44	1.03	2.8	1.8	108.4	<.02	8.8	0.003	0.18	0.8	10	<.2	123
RS-495-00 2267.8-2270.3	884	1.62	4.8	347.3	3	46.4	0.02	1.48	0.26	8.7	3.6	11.27	2.92	7.7	69	0.84	32.4	0.08	1824	2.34	0.046	2.6	0.144	21.83	1.29	2.05	2.3	6	161.5	<.02	7.3	0.001	0.34	0.7	7	<.2	137.1
RS-495-00 2270.3-2280.0	204	1.89	0.7	12.3	4	59.3	0.03	2.02	0.32	5.6	3.6	11.13	3.96	9.7	29	0.53	36.1	0.09	1721	1.94	0.047	4.2	0.132	24.27	0.16	0.99	3.2	0.5	134	<.02	8.2	0.004	0.16	0.7	12	<.2	122.8
RS-495-00 2285-2290	160	2.08	2.6	5.6	6	75.5	0.02	2.6	0.26	9.5	1.9	9.6	4.4	10.6	10	0.61	38.1	0.1	2283	0.87	0.05	4.9	0.135	21.78	0.01	0.42	3.9	0.1	165.1	<.02	8.2	0.033	0.17	0.9	14	<.2	122.6
RS-495-00 2310.0-2322.1	1615	0.97	16.8	33.9	1	63.1	0.47	0.69	0.27	4.8	3.3	9.85	3.3	3	160	0.55	20.9	0.03	640	1.96	0.028	6.4	0.091	27.18	3.46	4.93	0.9	6.9	124	0.03	4.6	<.001	0.43	0.6	4	1.1	105.4
RS-495-00 2322.1-2342.3	1487	0.61	75	34.3	1	25.8	0.02	0.1	0.07	0.8	5.3	5.64	2.02	2.1	116	0.37	26.1	0.01	141	2.3	0.015	16.3	0.003	20.57	0.83	4.85	0.3	7.8	88.3	<.02	8.2	<.001	0.2	0.5	3	<.2	58.6
RS-495-00 2342.3-2365.0	1318	0.89	33.8	44.9	2	119.4	<.02	0.1	0.06	0.3	2.6	6.43	1.77	2.7	265	0.52	30.2	0.01	92	1.33	0.019	6.7	0.083	23.42	1.44	4.28	0.4	7.5	78.2	<.02	10.7	<.001	0.26	0.7	2	<.2	95.4
RS-495-00 2365-2390	2346	0.79	28.4	52.8	3	48.3	0.02	0.11	0.07	0.4	3.3	3.74	1.78	2.5	113	0.46	32.2	0.01	92	1.29	0.017	7.3	0.004	23.58	1.4	4.01	0.3	7	71.6	<.02	10.8	<.001	0.24	0.6	2	<.2	94.5
RS-495-00 2390.0-2412.5	1036	0.6	9.4	35.8	2	91.5	0.02	0.09	0.07	0.5	2	3.48	1.69	2	184	0.35	38.4	0.01	89	0.67	0.016	5.8	0.004	24.71	1.37	1.86	0.3	4.4	69.4	<.02	11.7	<.001	0.14	0.6	<2	<.2	91.9
RS-495-00 2412.5-2435.0	542	0.75	4.4	23.7	1	134.4	<.02	0.06	0.09	0.3	2.9	2.97	1.38	2.2	99	0.4	35.1	0.01	71	0.64	0.014	4.8	0.004	24.3	1.06	3.7	0.3	7.5	62.7	<.02	11.5	<.001	0.38	0.7	<2	<.2	85.8
RS-495-00 2435.0-2454.3	266	0.88	11.5	12.2	1	156.9	0.02	0.96	0.11	0.3	3.3	3.51	1.47	3	69	0.51	36.1	0.02	726	0.89	0.021	6.8	0.005	24.1	1.01	1.71	0.5	2.2	99.3	<.02	12	<.001	0.32	0.8	<2	<.2	59.5
RS-495-00 2454.3-2468.4	3067	0.76	661.8	262.7	4	78.1	0.56	0.28	0.17	3.7	14.8	23.76	2.62	2.8	348	0.34	11.3	0.04	137	9.43	0.023	24.5	0.062	19.16	2.21	14.48	0.7	43.7	106	<.02	3.3	<.001	0.48	0.5	5	0.2	45.4
RS-495-00 2468.4-2484.5	1079	0.38	210.2	74.6	2	189.2	0.1	0.18	0.1	0.5	2.7	4.96	1.92	2.5	91	0.36	12.8	0.04	88	2.29	0.023	7.4	0.005	20.93	0.67	2.96	0.4	11.7	115.3	<.02	4.2	<.001	0.19	0.5	<2	<.2	24.9
RS-495-00 2484.5-2505.0	339	1.05	13	19.3	3	225.3	0.04	0.17	0.12	0.4	3.3	1.15	0.77	2.3	49	0.54	9.7	0.04	56	10.85	0.022	2	0.008	24.88	0.75	1.88	0.4	4	107.5	<.02	3.9	<.001	0.34	2.3	<2	<.2	67.5
RS-495-00 2505.0-2531.5	598	0.85	27.5	36.8	3	198.3	0.4	0.16	0.18	0.6	2.8	1.46	0.95	2.1	48	0.47	15.7	0.03	84	3.75	0.022	2.8	0.008	26.74	1	1.97	0.4	5.9	190.6	<.02	4	<.001	0.28	0.8	<2	<.2	70
RS-495-00 2531.5-2552.4	1205	0.8	30.2	38.6	<1	72.3	1.88	0.16	0.12	0.4	2.4	2.03	0.8	1.9	65	0.4	16.3	0.03	58	2.89	0.02	3.4	0.007	23.87	0.03	2	0.3	6.3	95.4	<.02	4.4	<.001	0.21	0.5	<2	<.2	37
RS-495-00 2552.4-2574.5	383	0.74	19.1	11	2	478.9	0.59	0.06	0.12	0.3	2.8	1.49	0.61	1.8	20	0.35	19.5	0.04	369	1.82	0.027	2.9	0.007	28.17	0.45	1.58	0.3	2.8	173.3	<.02	5.4	<.001	0.17	0.7	<2	<.2	16.9
RS-495-00 2574.5-2594.0	200	0.58	2.8	5.8	2	516	0.02	1.55	0.11	0.2	1.5	0.99	0.5	1	8	0.29	15.9	0.03	630	0.97	0.024	1.4	0.006	23.58	0.41	0.58	0.2	1.8	223.2	<.02	5.1	<.001	0.11	0.6	<2	<.2	26.8
RS-495-00 2594.0-2614.5	492	0.68	12.1	13.1	1	314.6	0.04	0.29	0.11	0.2	1.9	1.38	0.64	1.3	14	0.33	16.1	0.04	131	0.15	0.026	1.7	0.009	24.05	0.69	1.9	0.3	5.5	117.7	<.02	4.9	<.001	0.14	0.5	<2	<.2	29
RS-495-00 2614.5-2637.6	349	0.86	13.7	14.8	2	191.5	0.04	1.01	0.1	0.4	1	0.93	0.8	1.8	20	0.39	15	0.05	519	0.24	0.027	1.6	0.006	26.26	1	1.96	0.4	3.4	192.7	<.02	4.4	<.001	0.17	0.5	<2	<.2	31.9
RS-495-00 2637.6-2660.0	512	0.98	17.8	30.5	5	256.8	0.25	0.58	0.1	0.3	2	1.08	0.68	2	9	0.44	14.8	0.06	195	1.49	0.033	1.2	0.008	23.53	0.7	2.18	0.4	6.3	157.1	<.02	4.3	<.001	0.15	0.6	<2	<.2	27.5
RS-495-00 2660-2677	193	2.97	4.2	3.5	4	142	0.29	2.01	0.3	24.2	60.8	63.61	5.16	8.4	34	0.64	16.4	0.67	1279	0.69	0.045	84.6	0.119	16.5	1.82	2.69	6.3	0.7	253.7	0.03	2.8	0.001	0.31	0.4	73	<.2	126.6
RS-495-00 2677.0-2696.5	842	0.73	45	48.3	2	122.3	0.04	0.26	0.32	1.6	2.3	4.21	1.22	1.7	25	0.31	19.8	0.06	67	3.31	0.031	6.3	0.013	24.76	1.24	2.48	0.4	9.3	133.4	<.02	3	<.001	0.17	0.8	<2	<.2	88.1
RS-495-00 2696.5-2717.2	269	0.67	17.1	21.6	3	106.2	0.02	0.22	0.33	1.1	2.1	1.49	0.36	1.5	20	0.28	5.7	0.05	47	1.13	0.029	3.5	0.007	23.41	0.22	0.78	0.3	5.2	118.8	<.02	3.3	<.001	0.12	0.8	<2	<.2	47.8
RS-495-00 2717.2-2736.6	2848	0.96	52.1	11.7	3	86.3	0.21	1.83	6.92	10.1	15.5	94.36	3.51	2.3	118	0.21	2.4	0.61	623	32.28	0.01	71	0.055	20.3	3.53	24.43	1.2	29.4	130.3	0.07	1.3	0.001	0.52	0.4	49	<.2	585.7
RS-495-00 2736.6-2761.0	3419	1.06	49.6	5.1	3	67.2	0.22	1.19	9.91	11.3	17.9	110.43	3.75	2.4	134	0.2	2.4	0.58	420	34.25	0.01	80.7	0.043	16	3.54	24.8	1.2	31.2	83.4	0.1	1.5	0.001	0.55	0.5	58	<.2	817.6
34764	57966	2.38	112.3	5893.1	5	68.2	0.17	0.92	2.03	3.5	7.2	21.05	2.56	7.4	317	0.86	15.8	0.14	327	5.68	0.05	3.6	0.064	102.6	2.34	15.77	0.9	23.1	68.6	<.02	3.9	0.003	0.43	1.3	9	0.2	91.5
STANDARD DS2	263	1.76	55.9	196.3	4	149.9	10.26	0.56	9.96	11.7	168	124.57	3.13	6.1	257	0.16	15.4	0.61	840	14.18	0.03	36.4	0.088	31.37	0.02	7.83	2.8	2.2	28.9	1.8	3.5	0.098	1.8	18.9	75	6.2	163.2

American Assay Laboratories

INVOICE

Remit To: P.O. Box11530
Reno, Nevada 89510
Phone NO.: 702-356-0606
Fax No.: 702-356-1413

AMERICAN ASSAY LABORATORIES
1500 GLENDALE AVE.
SPARKS, NV 89431-5902

(775) 356-0606

INVOICE NO: SP 0057428-IN
INVOICE DATE: 06/02/00

INVOICE TO:
THE ROSEBUD MINING CO., LLC
HECLA MINING COMPANY, OPERATOR
P.O. BOX 2610
WINNEMUCCA NV 89446

THE ROSEBUD MINING CO., LLC
HECLA MINING COMPANY, OPERATOR
P.O. BOX 2610
WINNEMUCCA NV 89446

CUSTOMER P.O.	PROJECT	TERMS
RS-499	WILDROSE EAST	NET 30 - DUE IN U.S. DOLLARS

QUANTITY	DESCRIPTION	PRICE	AMOUNT
268	SAMPLES RECEIVED	.00	.00
1	NO PREPARATION REQUIRED	.00	.00
267	DRY/JAW CRUSH ENTIRE SAMPLE	2.30	614.10
267	"JONES" RIFFLE SPLIT	2.40	640.80
267	RING/PUCK MILL	2.00	534.00
268	Au (1 A.T. FIRE ASSAY)	8.00	2,144.00
268	HYDROCHLORIC/NITRIC DIGESTION	2.00	536.00
268	Ag ANALYSES	1.00	268.00
267	COMPOSITE CHARGE	1.25	333.75
68	MULTI-ELEMENT ICP PACKAGE	13.75	935.00

86- 2510-477
KAS

NET INVOICE:	6,005.65
LESS DISCOUNT:	2,101.98
FREIGHT:	.00
INVOICE TOTAL:	3,903.67

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP057428

American Assay Laboratories

PO BOX 11530
RENO NV,USA
Ph.(775) 356-0606, Fax.(775) 356-1413

HECLA MINING COMPANY

COPIES TO : BRIAN MORRIS
: KURT ALLEN
:
:

CLIENT REFERENCE No: RS-499 RECEIVED : 15 MAY 2000

No. SAMPLES : 268 REPORTED : 2 JUN 2000

MAIN SAMPLE TYPE : DRILL CUTTINGS

NEVADA LEGISLATIVE DISCLAIMER :-
The results of this assay were based solely upon the content of the sample submitted. Any decision to invest should be made only after the potential investment value of the claim or deposit has been determined based on the results of assays of multiple samples of geological materials collected by the prospective investor or by a qualified person selected by him and based on an evaluation of all engineering data which is available concerning any proposed project.

ANALYSIS	ANALYTICAL METHOD	QUALITY PARAMETER	UNIT	DETECTION
Au	FA30	15%	ppb	5
Au(R)	FA30	15%	ppb	5
Au(OZ)	FA30	15%	OPT	0.001
Au(RZ)	FA30	15%	OPT	0.001
Ag	D210	10%	ppm	0.5
Ag(OZ)	D210	10%	OPT	0.02

SIGNATORY : Leonard E. Mackedon B.S.

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP057428

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD
REFERENCE : RS-499

REPORTED : 2 JUN 2000

SAMPLES	Au FA30 ppb	Au(R) FA30 ppb	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	Ag D210 ppm	Ag(OZ) D210 OPT
RS-499 0000-0005	5		<0.001		<0.5	<0.02
RS-499 0005-0010	11		<0.001		<0.5	<0.02
RS-499 0010-0015	<5		<0.001		<0.5	<0.02
RS-499 0015-0020	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-499 0020-0025	34		<0.001		<0.5	<0.02
RS-499 0025-0030	25		<0.001		<0.5	<0.02
RS-499 0030-0035	<5		<0.001		<0.5	<0.02
RS-499 0035-0040	<5		<0.001		<0.5	<0.02
RS-499 0040-0045	<5		<0.001		<0.5	<0.02
RS-499 0045-0050	<5		<0.001		<0.5	<0.02
RS-499 0050-0055	<5		<0.001		<0.5	<0.02
RS-499 0055-0060	13		<0.001		<0.5	<0.02
RS-499 0060-0065	<5		<0.001		<0.5	<0.02
RS-499 0065-0070	8		<0.001		<0.5	<0.02
RS-499 0070-0075	5		<0.001		<0.5	<0.02
RS-499 0075-0080	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-499 0080-0085	<5		<0.001		<0.5	<0.02
RS-499 0085-0090	<5		<0.001		<0.5	<0.02
RS-499 0090-0095	<5		<0.001		<0.5	<0.02
RS-499 0095-0100	<5		<0.001		<0.5	<0.02
RS-499 0100-0105	<5		<0.001		<0.5	<0.02
RS-499 0105-0110	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-499 0110-0115	<5		<0.001		<0.5	<0.02
RS-499 0115-0120	<5		<0.001		<0.5	<0.02
RS-499 0120-0125	<5		<0.001		<0.5	<0.02

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP057428

American Assay Laboratories

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PROJECT : ROSEBUD
REFERENCE : RS-499

REPORTED : 2 JUN 2000

SAMPLES	Au FA30 ppb	Au(R) FA30 ppb	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	Ag D210 ppm	Ag(OZ) D210 OPT
RS-499 0125-0130	<5		<0.001		<0.5	<0.02
RS-499 0130-0135	<5		<0.001		<0.5	<0.02
RS-499 0135-0140	<5		<0.001		<0.5	<0.02
RS-499 0140-0145	<5		<0.001		<0.5	<0.02
RS-499 0145-0150	<5		<0.001		<0.5	<0.02
RS-499 0150-0155	5		<0.001		<0.5	<0.02
RS-499 0155-0160	<5		<0.001		<0.5	<0.02
RS-499 0160-0165	16		<0.001		<0.5	<0.02
RS-499 0165-0170	70	68	0.002	0.002	0.6	<0.02
RS-499 0170-0175	6		<0.001		<0.5	<0.02
RS-499 0175-0180	<5		<0.001		<0.5	<0.02
RS-499 0180-0185	<5		<0.001		<0.5	<0.02
RS-499 0185-0190	<5		<0.001		<0.5	<0.02
RS-499 0190-0195	<5		<0.001		<0.5	<0.02
RS-499 0195-0200	<5		<0.001		<0.5	<0.02
RS-499 0200-0205	<5		<0.001		<0.5	<0.02
RS-499 0205-0210	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-499 0210-0215	<5		<0.001		<0.5	<0.02
RS-499 0215-0220	<5		<0.001		<0.5	<0.02
RS-499 0220-0225	<5		<0.001		<0.5	<0.02
RS-499 0225-0230	<5		<0.001		<0.5	<0.02
RS-499 0230-0235	<5		<0.001		<0.5	<0.02
RS-499 0235-0240	<5		<0.001		<0.5	<0.02
RS-499 0240-0245	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-499 0245-0250	<5		<0.001		<0.5	<0.02

AMERICAN ASSAY LABORATORIES

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PROJECT : ROSEBUD
REFERENCE : RS-499

REPORTED : 2 JUN 2000

SAMPLES	Au FA30 ppb	Au(R) FA30 ppb	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	Ag D210 ppm	Ag(OZ) D210 OPT
RS-499 0250-0255	<5		<0.001		<0.5	<0.02
RS-499 0255-0260	<5		<0.001		<0.5	<0.02
RS-499 0260-0265	<5		<0.001		<0.5	<0.02
RS-499 0265-0270	<5		<0.001		<0.5	<0.02
RS-499 0270-0275	<5		<0.001		<0.5	<0.02
RS-499 0275-0280	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-499 0280-0285	<5		<0.001		<0.5	<0.02
RS-499 0285-0290	23		<0.001		<0.5	<0.02
RS-499 0290-0295	<5		<0.001		<0.5	<0.02
RS-499 0295-0300	<5		<0.001		<0.5	<0.02
RS-499 0300-0305	<5		<0.001		<0.5	<0.02
RS-499 0305-0310	<5		<0.001		<0.5	<0.02
RS-499 0310-0315	<5		<0.001		<0.5	<0.02
RS-499 0315-0320	<5		<0.001		<0.5	<0.02
RS-499 0320-0325	<5		<0.001		<0.5	<0.02
RS-499 0325-0330	<5		<0.001		<0.5	<0.02
RS-499 0330-0335	<5		<0.001		<0.5	<0.02
RS-499 0335-0340	<5		<0.001		<0.5	<0.02
RS-499 0340-0345	<5		<0.001		<0.5	<0.02
RS-499 0345-0350	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-499 0350-0355	<5		<0.001		<0.5	<0.02
RS-499 0355-0360	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-499 0360-0365	<5		<0.001		<0.5	<0.02
RS-499 0365-0370	<5		<0.001		<0.5	<0.02
RS-499 0370-0375	<5		<0.001		0.5	<0.02

AMERICAN ASSAY LABORATORIES

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PROJECT : ROSEBUD
REFERENCE : RS-499

REPORTED : 2 JUN 2000

SAMPLES	Au FA30 ppb	Au(R) FA30 ppb	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	Ag D210 ppm	Ag(OZ) D210 OPT
RS-499 0375-0380	<5		<0.001		3.8	0.11
RS-499 0380-0385	<5		<0.001		<0.5	<0.02
RS-499 0385-0390	<5		<0.001		<0.5	<0.02
RS-499 0390-0395	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-499 0395-0400	<5		<0.001		<0.5	<0.02
RS-499 0400-0405	<5		<0.001		<0.5	<0.02
RS-499 0405-0410	<5		<0.001		<0.5	<0.02
RS-499 0410-0415	<5		<0.001		<0.5	<0.02
RS-499 0415-0420	<5		<0.001		<0.5	<0.02
RS-499 0420-0425	<5		<0.001		<0.5	<0.02
RS-499 0425-0430	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-499 0430-0435	<5		<0.001		<0.5	<0.02
RS-499 0435-0440	<5		<0.001		<0.5	<0.02
RS-499 0440-0445	<5		<0.001		<0.5	<0.02
RS-499 0445-0450	<5		<0.001		<0.5	<0.02
RS-499 0450-0455	<5		<0.001		<0.5	<0.02
RS-499 0455-0460	<5		<0.001		<0.5	<0.02
RS-499 0460-0465	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-499 0465-0470	<5		<0.001		<0.5	<0.02
RS-499 0470-0475	<5		<0.001		<0.5	<0.02
RS-499 0475-0480	<5		<0.001		<0.5	<0.02
RS-499 0480-0485	<5		<0.001		<0.5	<0.02
RS-499 0485-0490	<5		<0.001		<0.5	<0.02
RS-499 0490-0495	<5		<0.001		<0.5	<0.02
RS-499 0495-0500	<5		<0.001		<0.5	<0.02

AMERICAN ASSAY LABORATORIES

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PROJECT : ROSEBUD
REFERENCE : RS-499

REPORTED : 2 JUN 2000

SAMPLES	Au FA30 ppb	Au(R) FA30 ppb	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	Ag D210 ppm	Ag(OZ) D210 OPT
RS-499 0500-0505	<5		<0.001		<0.5	<0.02
RS-499 0505-0510	<5		<0.001		<0.5	<0.02
RS-499 0510-0515	<5		<0.001		<0.5	<0.02
RS-499 0515-0520	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-499 0520-0525	<5		<0.001		0.5	<0.02
RS-499 0525-0530	<5		<0.001		<0.5	<0.02
RS-499 0530-0535	<5		<0.001		<0.5	<0.02
RS-499 0535-0540	<5		<0.001		<0.5	<0.02
RS-499 0540-0545	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-499 0545-0550	<5		<0.001		<0.5	<0.02
RS-499 0550-0555	<5		<0.001		<0.5	<0.02
RS-499 0555-0560	<5		<0.001		<0.5	<0.02
RS-499 0560-0565	<5		<0.001		<0.5	<0.02
RS-499 0565-0570	<5		<0.001		<0.5	<0.02
RS-499 0570-0575	<5		<0.001		<0.5	<0.02
RS-499 0575-0580	<5		<0.001		<0.5	<0.02
RS-499 0580-0585	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-499 0585-0590	<5		<0.001		<0.5	<0.02
RS-499 0590-0595	<5		<0.001		<0.5	<0.02
RS-499 0595-0600	<5		<0.001		<0.5	<0.02
RS-499 0600-0605	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-499 0605-0610	<5		<0.001		<0.5	<0.02
RS-499 0610-0615	<5		<0.001		<0.5	<0.02
RS-499 0615-0620	<5		<0.001		<0.5	<0.02
RS-499 0620-0625	<5		<0.001		<0.5	<0.02

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP057428

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD
REFERENCE : RS-499

REPORTED : 2 JUN 2000

SAMPLES	Au FA30 ppb	Au(R) FA30 ppb	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	Ag D210 ppm	Ag(OZ) D210 OPT
RS-499 0625-0630	<5		<0.001		<0.5	<0.02
RS-499 0630-0635	<5		<0.001		<0.5	<0.02
RS-499 0635-0640	<5		<0.001		<0.5	<0.02
RS-499 0640-0645	<5		<0.001		<0.5	<0.02
RS-499 0645-0650	<5		<0.001		<0.5	<0.02
RS-499 0650-0655	<5		<0.001		<0.5	<0.02
RS-499 0655-0660	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-499 0660-0665	<5		<0.001		<0.5	<0.02
RS-499 0665-0670	<5		<0.001		<0.5	<0.02
RS-499 0670-0675	<5		<0.001		<0.5	<0.02
RS-499 0675-0680	<5		<0.001		<0.5	<0.02
RS-499 0680-0685	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-499 0685-0690	<5		<0.001		<0.5	<0.02
RS-499 0690-0695	<5		<0.001		<0.5	<0.02
RS-499 0695-0700	8		<0.001		<0.5	<0.02
RS-499 0700-0705	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-499 0705-0710	<5		<0.001		<0.5	<0.02
RS-499 0710-0715	<5		<0.001		<0.5	<0.02
RS-499 0715-0720	<5		<0.001		<0.5	<0.02
RS-499 0720-0725	<5		<0.001		<0.5	<0.02
RS-499 0725-0730	<5		<0.001		<0.5	<0.02
RS-499 0730-0735	<5		<0.001		<0.5	<0.02
RS-499 0735-0740	<5		<0.001		<0.5	<0.02
RS-499 0740-0745	8	6	<0.001	<0.001	<0.5	<0.02
RS-499 0745-0750	<5		<0.001		<0.5	<0.02

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP057428

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
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REFERENCE : RS-499

REPORTED : 2 JUN 2000

SAMPLES	Au FA30 ppb	Au(R) FA30 ppb	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	Ag D210 ppm	Ag(OZ) D210 OPT
RS-499 0750-0755	<5		<0.001		<0.5	<0.02
RS-499 0755-0760	<5		<0.001		<0.5	<0.02
RS-499 0760-0765	<5		<0.001		<0.5	<0.02
RS-499 0765-0770	<5		<0.001		<0.5	<0.02
RS-499 0770-0775	<5		<0.001		<0.5	<0.02
RS-499 0775-0780	<5		<0.001		<0.5	<0.02
RS-499 0780-0785	<5		<0.001		<0.5	<0.02
RS-499 0785-0790	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-499 0790-0795	<5		<0.001		<0.5	<0.02
RS-499 0795-0800	<5		<0.001		<0.5	<0.02
RS-499 0800-0805	<5		<0.001		<0.5	<0.02
RS-499 0805-0810	<5		<0.001		<0.5	<0.02
RS-499 0810-0815	<5		<0.001		<0.5	<0.02
RS-499 0815-0820	<5		<0.001		<0.5	<0.02
RS-499 0820-0825	<5		<0.001		<0.5	<0.02
RS-499 0825-0830	<5		<0.001		0.7	0.02
RS-499 0830-0835	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-499 0835-0840	<5		<0.001		0.6	<0.02
RS-499 0840-0845	<5		<0.001		<0.5	<0.02
RS-499 0845-0850	<5		<0.001		<0.5	<0.02
RS-499 0850-0855	<5		<0.001		<0.5	<0.02
RS-499 0855-0860	<5		<0.001		<0.5	<0.02
RS-499 0860-0865	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-499 0865-0870	<5		<0.001		<0.5	<0.02
RS-499 0870-0875	<5		<0.001		<0.5	<0.02

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP057428

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD
REFERENCE : RS-499

REPORTED : 2 JUN 2000

SAMPLES	Au FA30 ppb	Au(R) FA30 ppb	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	Ag D210 ppm	Ag(OZ) D210 OPT
RS-499 0875-0880	731	648	0.021	0.019	1.9	0.06
RS-499 0880-0885	49	42	0.001	0.001	2.3	0.07
RS-499 0885-0890	90		0.003		8.0	0.23
RS-499 0890-0895	404	330	0.012	0.010	8.6	0.25
RS-499 0895-0900	129		0.004		7.9	0.23
RS-499 0900-0905	171		0.005		6.5	0.19
RS-499 0905-0910	22		<0.001		2.6	0.08
RS-499 0910-0915	55		0.002		1.3	0.04
RS-499 0915-0920	26		<0.001		1.1	0.03
RS-499 0920-0925	29	26	<0.001	<0.001	1.2	0.04
RS-499 0925-0930	81	86	0.002	0.003	2.8	0.08
RS-499 0930-0935	23		<0.001		0.7	0.02
RS-499 0935-0940	36		0.001		1.0	0.03
RS-499 0940-0945	43		0.001		4.9	0.14
RS-499 0945-0950	47		0.001		7.7	0.22
RS-499 0950-0955	54		0.002		3.9	0.11
RS-499 0955-0960	57		0.002		4.6	0.13
RS-499 0960-0965	43	44	0.001	0.001	2.6	0.08
RS-499 0965-0970	42		0.001		2.8	0.08
RS-499 0970-0975	54		0.002		1.9	0.06
RS-499 0975-0980	98	106	0.003	0.003	3.0	0.09
RS-499 0980-0985	92		0.003		3.4	0.10
RS-499 0985-0990	27		<0.001		1.4	0.04
RS-499 0990-0995	10		<0.001		1.4	0.04
RS-499 0995-1000	145		0.004		2.8	0.08

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP057428

American Assay Laboratories

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PROJECT : ROSEBUD
REFERENCE : RS-499

REPORTED : 2 JUN 2000

SAMPLES	Au FA30 ppb	Au(R) FA30 ppb	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	Ag D210 ppm	Ag(OZ) D210 OPT
RS-499 1000-1005	16		<0.001		1.5	0.04
RS-499 1005-1010	177		0.005		11.1	0.32
RS-499 1010-1015	333		0.010		2.3	0.07
RS-499 1015-1020	460	464	0.013	0.014	4.5	0.13
RS-499 1020-1025	154		0.004		2.0	0.06
RS-499 1025-1030	<5		<0.001		1.7	0.05
RS-499 1030-1035	168		0.005		2.0	0.06
RS-499 1035-1040	68		0.002		1.5	0.04
RS-499 1040-1045	56	62	0.002	0.002	2.1	0.06
RS-499 1045-1050	149	126	0.004	0.004	6.9	0.20
RS-499 1050-1055	52		0.002		1.5	0.04
RS-499 1055-1060	28		<0.001		2.0	0.06
RS-499 1060-1065	<5		<0.001		2.4	0.07
RS-499 1065-1070	<5		<0.001		2.0	0.06
RS-499 1070-1075	5		<0.001		0.7	0.02
RS-499 1075-1080	<5		<0.001		0.6	<0.02
RS-499 1080-1085	<5	<5	<0.001	<0.001	1.0	0.03
RS-499 1085-1090	21		<0.001		1.1	0.03
RS-499 1090-1095	58		0.002		2.7	0.08
RS-499 1095-1100	45		0.001		1.4	0.04
RS-499 1100-1105	56		0.002		1.9	0.06
RS-499 1105-1110	8		<0.001		1.5	0.04
RS-499 1110-1115	34		<0.001		1.3	0.04
RS-499 1115-1120	33		<0.001		1.6	0.05
RS-499 1120-1125	44		0.001		1.3	0.04

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP057428

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD
REFERENCE : RS-499

REPORTED : 2 JUN 2000

SAMPLES	Au FA30 ppb	Au(R) FA30 ppb	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	Ag D210 ppm	Ag(OZ) D210 OPT
RS-499 1125-1130	51		0.001		0.8	0.02
RS-499 1130-1135	9		<0.001		1.5	0.04
RS-499 1135-1140	<5		<0.001		0.6	<0.02
RS-499 1140-1145	5	8	<0.001	<0.001	1.5	0.04
RS-499 1145-1150	<5		<0.001		<0.5	<0.02
RS-499 1150-1155	5		<0.001		0.8	0.02
RS-499 1155-1160	51	60	0.001	0.002	0.7	0.02
RS-499 1160-1165	11		<0.001		0.6	<0.02
RS-499 1165-1170	36	24	0.001	<0.001	2.1	0.06
RS-499 1170-1175	30		<0.001		1.6	0.05
RS-499 1175-1180	57		0.002		1.2	0.04
RS-499 1180-1185	106	130	0.003	0.004	1.1	0.03
RS-499 1185-1190	100		0.003		2.4	0.07
RS-499 1190-1195	36		0.001		1.7	0.05
RS-499 1195-1200	38		0.001		1.6	0.05
RS-499 1200-1205	80		0.002		0.7	0.02
RS-499 1205-1210	41		0.001		1.1	0.03
RS-499 1210-1215	20		<0.001		1.4	0.04
RS-499 1215-1220	39		0.001		1.9	0.06
RS-499 1220-1225	37		0.001		1.2	0.04
RS-499 1225-1230	183	184	0.005	0.005	2.6	0.08
RS-499 1230-1235	38		0.001		2.0	0.06
RS-499 1235-1240	<5		<0.001		1.5	0.04
RS-499 1240-1245	11		<0.001		1.2	0.04
RS-499 1245-1250	20		<0.001		0.6	<0.02

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP057428

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REFERENCE : RS-499

REPORTED : 2 JUN 2000

SAMPLES	Au FA30 ppb	Au(R) FA30 ppb	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	Ag D210 ppm	Ag(OZ) D210 OPT
RS-499 1250-1255	22		<0.001		1.7	0.05
RS-499 1255-1260	26		<0.001		1.7	0.05
RS-499 1260-1265	6		<0.001		1.2	0.04
RS-499 1265-1270	10		<0.001		1.1	0.03
RS-499 1270-1275	6		<0.001		0.5	<0.02
RS-499 1275-1280	9		<0.001		0.6	<0.02
RS-499 1280-1285	51	56	0.001	0.002	0.9	0.03
RS-499 1285-1290	13		<0.001		1.0	0.03
RS-499 1290-1295	6		<0.001		1.0	0.03
RS-499 1295-1300	11	12	<0.001	<0.001	1.6	0.05
RS-499 1300-1305	113		0.003		3.7	0.11
RS-499 1305-1310	47		0.001		1.1	0.03
RS-499 1310-1315	75		0.002		1.7	0.05
RS-499 1315-1320	28		<0.001		2.4	0.07
RS-499 1320-1325	8		<0.001		1.2	0.04
RS-499 1325-1330	6		<0.001		0.7	0.02
RS-499 1330-1335	11		<0.001		1.1	0.03
34763	2018	2092	0.059	0.061	39.6	1.16

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP057428

American Assay Laboratories

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HECLA MINING COMPANY

COPIES TO : BRIAN MORRIS
: KURT ALLEN
:
:

CLIENT REFERENCE No: RS-499
No. SAMPLES : 268
MAIN SAMPLE TYPE : DRILL CUTTINGS

RECEIVED : 15 MAY 2000
REPORTED : 2 JUN 2000

NEVADA LEGISLATIVE DISCLAIMER :-
The results of this assay were based solely upon the content of the sample submitted. Any decision to invest should be made only after the potential investment value of the claim or deposit has been determined based on the results of assays of multiple samples of geological materials collected by the prospective investor or by a qualified person selected by him and based on an evaluation of all engineering data which is available concerning any proposed project.

ANALYSIS	ANALYTICAL METHOD	QUALITY PARAMETER	UNIT	DETECTION
Au	FA30	15%	ppb	5
Au(R)	FA30	15%	ppb	5
Au(OZ)	FA30	15%	OPT	0.001
Au(RZ)	FA30	15%	OPT	0.001
Ag	D210	10%	ppm	0.5
Ag(OZ)	D210	10%	OPT	0.02

SIGNATORY : Leonard E. Mackedon B.S.

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP057428

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REFERENCE : RS-499

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SAMPLES	Au FA30 ppb	Au(R) FA30 ppb	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	Ag D210 ppm	Ag(OZ) D210 OPT
RS-499 0000-0005	5		<0.001		<0.5	<0.02
RS-499 0005-0010	11		<0.001		<0.5	<0.02
RS-499 0010-0015	<5		<0.001		<0.5	<0.02
RS-499 0015-0020	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-499 0020-0025	34		<0.001		<0.5	<0.02
RS-499 0025-0030	25		<0.001		<0.5	<0.02
RS-499 0030-0035	<5		<0.001		<0.5	<0.02
RS-499 0035-0040	<5		<0.001		<0.5	<0.02
RS-499 0040-0045	<5		<0.001		<0.5	<0.02
RS-499 0045-0050	<5		<0.001		<0.5	<0.02
RS-499 0050-0055	<5		<0.001		<0.5	<0.02
RS-499 0055-0060	13		<0.001		<0.5	<0.02
RS-499 0060-0065	<5		<0.001		<0.5	<0.02
RS-499 0065-0070	8		<0.001		<0.5	<0.02
RS-499 0070-0075	5		<0.001		<0.5	<0.02
RS-499 0075-0080	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-499 0080-0085	<5		<0.001		<0.5	<0.02
RS-499 0085-0090	<5		<0.001		<0.5	<0.02
RS-499 0090-0095	<5		<0.001		<0.5	<0.02
RS-499 0095-0100	<5		<0.001		<0.5	<0.02
RS-499 0100-0105	<5		<0.001		<0.5	<0.02
RS-499 0105-0110	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-499 0110-0115	<5		<0.001		<0.5	<0.02
RS-499 0115-0120	<5		<0.001		<0.5	<0.02
RS-499 0120-0125	<5		<0.001		<0.5	<0.02

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SAMPLES	Au FA30 ppb	Au(R) FA30 ppb	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	Ag D210 ppm	Ag(OZ) D210 OPT
RS-499 0125-0130	<5		<0.001		<0.5	<0.02
RS-499 0130-0135	<5		<0.001		<0.5	<0.02
RS-499 0135-0140	<5		<0.001		<0.5	<0.02
RS-499 0140-0145	<5		<0.001		<0.5	<0.02
RS-499 0145-0150	<5		<0.001		<0.5	<0.02
RS-499 0150-0155	5		<0.001		<0.5	<0.02
RS-499 0155-0160	<5		<0.001		<0.5	<0.02
RS-499 0160-0165	16		<0.001		<0.5	<0.02
RS-499 0165-0170	70	68	0.002	0.002	0.6	<0.02
RS-499 0170-0175	6		<0.001		<0.5	<0.02
RS-499 0175-0180	<5		<0.001		<0.5	<0.02
RS-499 0180-0185	<5		<0.001		<0.5	<0.02
RS-499 0185-0190	<5		<0.001		<0.5	<0.02
RS-499 0190-0195	<5		<0.001		<0.5	<0.02
RS-499 0195-0200	<5		<0.001		<0.5	<0.02
RS-499 0200-0205	<5		<0.001		<0.5	<0.02
RS-499 0205-0210	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-499 0210-0215	<5		<0.001		<0.5	<0.02
RS-499 0215-0220	<5		<0.001		<0.5	<0.02
RS-499 0220-0225	<5		<0.001		<0.5	<0.02
RS-499 0225-0230	<5		<0.001		<0.5	<0.02
RS-499 0230-0235	<5		<0.001		<0.5	<0.02
RS-499 0235-0240	<5		<0.001		<0.5	<0.02
RS-499 0240-0245	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-499 0245-0250	<5		<0.001		<0.5	<0.02

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SAMPLES	Au FA30 ppb	Au(R) FA30 ppb	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	Ag D210 ppm	Ag(OZ) D210 OPT
RS-499 0250-0255	<5		<0.001		<0.5	<0.02
RS-499 0255-0260	<5		<0.001		<0.5	<0.02
RS-499 0260-0265	<5		<0.001		<0.5	<0.02
RS-499 0265-0270	<5		<0.001		<0.5	<0.02
RS-499 0270-0275	<5		<0.001		<0.5	<0.02
RS-499 0275-0280	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-499 0280-0285	<5		<0.001		<0.5	<0.02
RS-499 0285-0290	23		<0.001		<0.5	<0.02
RS-499 0290-0295	<5		<0.001		<0.5	<0.02
RS-499 0295-0300	<5		<0.001		<0.5	<0.02
RS-499 0300-0305	<5		<0.001		<0.5	<0.02
RS-499 0305-0310	<5		<0.001		<0.5	<0.02
RS-499 0310-0315	<5		<0.001		<0.5	<0.02
RS-499 0315-0320	<5		<0.001		<0.5	<0.02
RS-499 0320-0325	<5		<0.001		<0.5	<0.02
RS-499 0325-0330	<5		<0.001		<0.5	<0.02
RS-499 0330-0335	<5		<0.001		<0.5	<0.02
RS-499 0335-0340	<5		<0.001		<0.5	<0.02
RS-499 0340-0345	<5		<0.001		<0.5	<0.02
RS-499 0345-0350	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-499 0350-0355	<5		<0.001		<0.5	<0.02
RS-499 0355-0360	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-499 0360-0365	<5		<0.001		<0.5	<0.02
RS-499 0365-0370	<5		<0.001		<0.5	<0.02
RS-499 0370-0375	<5		<0.001		0.5	<0.02

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP057428

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD
REFERENCE : RS-499

REPORTED : 2 JUN 2000

SAMPLES	Au FA30 ppb	Au(R) FA30 ppb	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	Ag D210 ppm	Ag(OZ) D210 OPT
RS-499 0375-0380	<5		<0.001		3.8	0.11
RS-499 0380-0385	<5		<0.001		<0.5	<0.02
RS-499 0385-0390	<5		<0.001		<0.5	<0.02
RS-499 0390-0395	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-499 0395-0400	<5		<0.001		<0.5	<0.02
RS-499 0400-0405	<5		<0.001		<0.5	<0.02
RS-499 0405-0410	<5		<0.001		<0.5	<0.02
RS-499 0410-0415	<5		<0.001		<0.5	<0.02
RS-499 0415-0420	<5		<0.001		<0.5	<0.02
RS-499 0420-0425	<5		<0.001		<0.5	<0.02
RS-499 0425-0430	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-499 0430-0435	<5		<0.001		<0.5	<0.02
RS-499 0435-0440	<5		<0.001		<0.5	<0.02
RS-499 0440-0445	<5		<0.001		<0.5	<0.02
RS-499 0445-0450	<5		<0.001		<0.5	<0.02
RS-499 0450-0455	<5		<0.001		<0.5	<0.02
RS-499 0455-0460	<5		<0.001		<0.5	<0.02
RS-499 0460-0465	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-499 0465-0470	<5		<0.001		<0.5	<0.02
RS-499 0470-0475	<5		<0.001		<0.5	<0.02
RS-499 0475-0480	<5		<0.001		<0.5	<0.02
RS-499 0480-0485	<5		<0.001		<0.5	<0.02
RS-499 0485-0490	<5		<0.001		<0.5	<0.02
RS-499 0490-0495	<5		<0.001		<0.5	<0.02
RS-499 0495-0500	<5		<0.001		<0.5	<0.02

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP057428

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CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD
REFERENCE : RS-499

REPORTED : 2 JUN 2000

SAMPLES	Au FA30 ppb	Au(R) FA30 ppb	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	Ag D210 ppm	Ag(OZ) D210 OPT
RS-499 0500-0505	<5		<0.001		<0.5	<0.02
RS-499 0505-0510	<5		<0.001		<0.5	<0.02
RS-499 0510-0515	<5		<0.001		<0.5	<0.02
RS-499 0515-0520	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-499 0520-0525	<5		<0.001		0.5	<0.02
RS-499 0525-0530	<5		<0.001		<0.5	<0.02
RS-499 0530-0535	<5		<0.001		<0.5	<0.02
RS-499 0535-0540	<5		<0.001		<0.5	<0.02
RS-499 0540-0545	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-499 0545-0550	<5		<0.001		<0.5	<0.02
RS-499 0550-0555	<5		<0.001		<0.5	<0.02
RS-499 0555-0560	<5		<0.001		<0.5	<0.02
RS-499 0560-0565	<5		<0.001		<0.5	<0.02
RS-499 0565-0570	<5		<0.001		<0.5	<0.02
RS-499 0570-0575	<5		<0.001		<0.5	<0.02
RS-499 0575-0580	<5		<0.001		<0.5	<0.02
RS-499 0580-0585	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-499 0585-0590	<5		<0.001		<0.5	<0.02
RS-499 0590-0595	<5		<0.001		<0.5	<0.02
RS-499 0595-0600	<5		<0.001		<0.5	<0.02
RS-499 0600-0605	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-499 0605-0610	<5		<0.001		<0.5	<0.02
RS-499 0610-0615	<5		<0.001		<0.5	<0.02
RS-499 0615-0620	<5		<0.001		<0.5	<0.02
RS-499 0620-0625	<5		<0.001		<0.5	<0.02

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP057428

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD
REFERENCE : RS-499

REPORTED : 2 JUN 2000

SAMPLES	Au FA30 ppb	Au(R) FA30 ppb	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	Ag D210 ppm	Ag(OZ) D210 OPT
RS-499 0625-0630	<5		<0.001		<0.5	<0.02
RS-499 0630-0635	<5		<0.001		<0.5	<0.02
RS-499 0635-0640	<5		<0.001		<0.5	<0.02
RS-499 0640-0645	<5		<0.001		<0.5	<0.02
RS-499 0645-0650	<5		<0.001		<0.5	<0.02
RS-499 0650-0655	<5		<0.001		<0.5	<0.02
RS-499 0655-0660	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-499 0660-0665	<5		<0.001		<0.5	<0.02
RS-499 0665-0670	<5		<0.001		<0.5	<0.02
RS-499 0670-0675	<5		<0.001		<0.5	<0.02
RS-499 0675-0680	<5		<0.001		<0.5	<0.02
RS-499 0680-0685	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-499 0685-0690	<5		<0.001		<0.5	<0.02
RS-499 0690-0695	<5		<0.001		<0.5	<0.02
RS-499 0695-0700	8		<0.001		<0.5	<0.02
RS-499 0700-0705	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-499 0705-0710	<5		<0.001		<0.5	<0.02
RS-499 0710-0715	<5		<0.001		<0.5	<0.02
RS-499 0715-0720	<5		<0.001		<0.5	<0.02
RS-499 0720-0725	<5		<0.001		<0.5	<0.02
RS-499 0725-0730	<5		<0.001		<0.5	<0.02
RS-499 0730-0735	<5		<0.001		<0.5	<0.02
RS-499 0735-0740	<5		<0.001		<0.5	<0.02
RS-499 0740-0745	8	6	<0.001	<0.001	<0.5	<0.02
RS-499 0745-0750	<5		<0.001		<0.5	<0.02

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP057428

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD
REFERENCE : RS-499

REPORTED : 2 JUN 2000

SAMPLES	Au FA30 ppb	Au(R) FA30 ppb	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	Ag D210 ppm	Ag(OZ) D210 OPT
RS-499 0750-0755	<5		<0.001		<0.5	<0.02
RS-499 0755-0760	<5		<0.001		<0.5	<0.02
RS-499 0760-0765	<5		<0.001		<0.5	<0.02
RS-499 0765-0770	<5		<0.001		<0.5	<0.02
RS-499 0770-0775	<5		<0.001		<0.5	<0.02
RS-499 0775-0780	<5		<0.001		<0.5	<0.02
RS-499 0780-0785	<5		<0.001		<0.5	<0.02
RS-499 0785-0790	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-499 0790-0795	<5		<0.001		<0.5	<0.02
RS-499 0795-0800	<5		<0.001		<0.5	<0.02
RS-499 0800-0805	<5		<0.001		<0.5	<0.02
RS-499 0805-0810	<5		<0.001		<0.5	<0.02
RS-499 0810-0815	<5		<0.001		<0.5	<0.02
RS-499 0815-0820	<5		<0.001		<0.5	<0.02
RS-499 0820-0825	<5		<0.001		<0.5	<0.02
RS-499 0825-0830	<5		<0.001		0.7	0.02
RS-499 0830-0835	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-499 0835-0840	<5		<0.001		0.6	<0.02
RS-499 0840-0845	<5		<0.001		<0.5	<0.02
RS-499 0845-0850	<5		<0.001		<0.5	<0.02
RS-499 0850-0855	<5		<0.001		<0.5	<0.02
RS-499 0855-0860	<5		<0.001		<0.5	<0.02
RS-499 0860-0865	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-499 0865-0870	<5		<0.001		<0.5	<0.02
RS-499 0870-0875	<5		<0.001		<0.5	<0.02

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP057428

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD
REFERENCE : RS-499

REPORTED : 2 JUN 2000

SAMPLES	Au FA30 ppb	Au(R) FA30 ppb	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	Ag D210 ppm	Ag(OZ) D210 OPT
RS-499 0875-0880	731	648	0.021	0.019	1.9	0.06
RS-499 0880-0885	49	42	0.001	0.001	2.3	0.07
RS-499 0885-0890	90		0.003		8.0	0.23
RS-499 0890-0895	404	330	0.012	0.010	8.6	0.25
RS-499 0895-0900	129		0.004		7.9	0.23
RS-499 0900-0905	171		0.005		6.5	0.19
RS-499 0905-0910	22		<0.001		2.6	0.08
RS-499 0910-0915	55		0.002		1.3	0.04
RS-499 0915-0920	26		<0.001		1.1	0.03
RS-499 0920-0925	29	26	<0.001	<0.001	1.2	0.04
RS-499 0925-0930	81	86	0.002	0.003	2.8	0.08
RS-499 0930-0935	23		<0.001		0.7	0.02
RS-499 0935-0940	36		0.001		1.0	0.03
RS-499 0940-0945	43		0.001		4.9	0.14
RS-499 0945-0950	47		0.001		7.7	0.22
RS-499 0950-0955	54		0.002		3.9	0.11
RS-499 0955-0960	57		0.002		4.6	0.13
RS-499 0960-0965	43	44	0.001	0.001	2.6	0.08
RS-499 0965-0970	42		0.001		2.8	0.08
RS-499 0970-0975	54		0.002		1.9	0.06
RS-499 0975-0980	98	106	0.003	0.003	3.0	0.09
RS-499 0980-0985	92		0.003		3.4	0.10
RS-499 0985-0990	27		<0.001		1.4	0.04
RS-499 0990-0995	10		<0.001		1.4	0.04
RS-499 0995-1000	145		0.004		2.8	0.08

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP057428

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD
REFERENCE : RS-499

REPORTED : 2 JUN 2000

SAMPLES	Au FA30 ppb	Au(R) FA30 ppb	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	Ag D210 ppm	Ag(OZ) D210 OPT
RS-499 1000-1005	16		<0.001		1.5	0.04
RS-499 1005-1010	177		0.005		11.1	0.32
RS-499 1010-1015	333		0.010		2.3	0.07
RS-499 1015-1020	460	464	0.013	0.014	4.5	0.13
RS-499 1020-1025	154		0.004		2.0	0.06
RS-499 1025-1030	<5		<0.001		1.7	0.05
RS-499 1030-1035	168		0.005		2.0	0.06
RS-499 1035-1040	68		0.002		1.5	0.04
RS-499 1040-1045	56	62	0.002	0.002	2.1	0.06
RS-499 1045-1050	149	126	0.004	0.004	6.9	0.20
RS-499 1050-1055	52		0.002		1.5	0.04
RS-499 1055-1060	28		<0.001		2.0	0.06
RS-499 1060-1065	<5		<0.001		2.4	0.07
RS-499 1065-1070	<5		<0.001		2.0	0.06
RS-499 1070-1075	5		<0.001		0.7	0.02
RS-499 1075-1080	<5		<0.001		0.6	<0.02
RS-499 1080-1085	<5	<5	<0.001	<0.001	1.0	0.03
RS-499 1085-1090	21		<0.001		1.1	0.03
RS-499 1090-1095	58		0.002		2.7	0.08
RS-499 1095-1100	45		0.001		1.4	0.04
RS-499 1100-1105	56		0.002		1.9	0.06
RS-499 1105-1110	8		<0.001		1.5	0.04
RS-499 1110-1115	34		<0.001		1.3	0.04
RS-499 1115-1120	33		<0.001		1.6	0.05
RS-499 1120-1125	44		0.001		1.3	0.04

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP057428

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REFERENCE : RS-499

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SAMPLES	Au FA30 ppb	Au(R) FA30 ppb	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	Ag D210 ppm	Ag(OZ) D210 OPT
RS-499 1125-1130	51		0.001		0.8	0.02
RS-499 1130-1135	9		<0.001		1.5	0.04
RS-499 1135-1140	<5		<0.001		0.6	<0.02
RS-499 1140-1145	5	8	<0.001	<0.001	1.5	0.04
RS-499 1145-1150	<5		<0.001		<0.5	<0.02
RS-499 1150-1155	5		<0.001		0.8	0.02
RS-499 1155-1160	51	60	0.001	0.002	0.7	0.02
RS-499 1160-1165	11		<0.001		0.6	<0.02
RS-499 1165-1170	36	24	0.001	<0.001	2.1	0.06
RS-499 1170-1175	30		<0.001		1.6	0.05
RS-499 1175-1180	57		0.002		1.2	0.04
RS-499 1180-1185	106	130	0.003	0.004	1.1	0.03
RS-499 1185-1190	100		0.003		2.4	0.07
RS-499 1190-1195	36		0.001		1.7	0.05
RS-499 1195-1200	38		0.001		1.6	0.05
RS-499 1200-1205	80		0.002		0.7	0.02
RS-499 1205-1210	41		0.001		1.1	0.03
RS-499 1210-1215	20		<0.001		1.4	0.04
RS-499 1215-1220	39		0.001		1.9	0.06
RS-499 1220-1225	37		0.001		1.2	0.04
RS-499 1225-1230	183	184	0.005	0.005	2.6	0.08
RS-499 1230-1235	38		0.001		2.0	0.06
RS-499 1235-1240	<5		<0.001		1.5	0.04
RS-499 1240-1245	11		<0.001		1.2	0.04
RS-499 1245-1250	20		<0.001		0.6	<0.02

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP057428

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
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REFERENCE : RS-499

REPORTED : 2 JUN 2000

SAMPLES	Au FA30 ppb	Au(R) FA30 ppb	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	Ag D210 ppm	Ag(OZ) D210 OPT
RS-499 1250-1255	22		<0.001		1.7	0.05
RS-499 1255-1260	26		<0.001		1.7	0.05
RS-499 1260-1265	6		<0.001		1.2	0.04
RS-499 1265-1270	10		<0.001		1.1	0.03
RS-499 1270-1275	6		<0.001		0.5	<0.02
RS-499 1275-1280	9		<0.001		0.6	<0.02
RS-499 1280-1285	51	56	0.001	0.002	0.9	0.03
RS-499 1285-1290	13		<0.001		1.0	0.03
RS-499 1290-1295	6		<0.001		1.0	0.03
RS-499 1295-1300	11	12	<0.001	<0.001	1.6	0.05
RS-499 1300-1305	113		0.003		3.7	0.11
RS-499 1305-1310	47		0.001		1.1	0.03
RS-499 1310-1315	75		0.002		1.7	0.05
RS-499 1315-1320	28		<0.001		2.4	0.07
RS-499 1320-1325	8		<0.001		1.2	0.04
RS-499 1325-1330	6		<0.001		0.7	0.02
RS-499 1330-1335	11		<0.001		1.1	0.03
34763	2018	2092	0.059	0.061	39.6	1.16

AMERICAN ASSAY LABORATORIES
AAL 03-0 ICP PACKAGE DETECTION LIMITS

ELEMENT	Ag	Al	As	B	Ba	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	Hg	K	La	Mg	Mn	Mo	Na	Ni	P	Pb	Sb	Se	Sr	Te	Th	Ti	Tl	U	V	W	Zn
SAMPLES	ppb	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppb	%	ppm	%	ppm	ppm	%	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm
	30	0.01	0.5	3	1	0.1	0.01	.01	1	1	0.2	0.01	0.5	10	0.01	1	0.01	2	0.1	0.01	1	0.001	0.3	0.2	0.4	1	0.2	2	0.01	0.2	5	1	2	1

5.0 GRAMS OF PULP IS DIGESTED WITH HYDROCHLORIC AND NITRIC ACID AT 95 DEGREE CENTIGRADE FOR ONE HOUR.
DIGEST IS PARTIAL FOR Al, B, Ba, Ca, Co, Cr, Fe, K, La, Mg, Mn, Na, Ni, P, Sr, Th, Ti, U, V AND W.
ORGANIC SOLUTION EXTRACTION AND ULTRASONIC ICP FOR Ag, As, Bi, Cd, Cu, Ga, Mo, Pb, Sb, Se, Te AND Tl.
Hg BY COLD VAPOR AAS.

AMERICAN ASSAY LABORATORIES
1500 GLENDALE AVE.
SPARKS, NV 89431
PHONE: (775) 356-0606
FAX: (775) 356-1413

CLIENT:	HECLA MINING CO.
CLIENT REF:	KURT ALLEN
AAL REF:	SP57428
METHOD:	AAL03-0

ELEMENT	Ag	Al	As	Au	B	Ba	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	Hg	K	La	Mg	Mn	Mo	Na	Ni	P	Pb	S	Sb	Sc	Se	Sr	Te	Th	Ti	Tl	U	V	W	Zn
SAMPLES	ppb	%	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppb	%	ppm	%	ppm	ppm	%	ppm	%	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm
RS-499 0000-0020	40	1.33	6	2.8	7	82.30	0.14	0.69	0.58	4.30	3.6	7.38	2.38	4.3	132	0.11	17.1	0.16	177	1.14	0.056	7.7	0.026	18.88	< .01	4.08	2.1	< .1	73.1	< .02	5.9	0.052	0.08	2.3	24	< .2	88.2
RS-499 0020-0040	42	1.1	4.2	11.9	3	125.30	0.12	0.34	0.69	5.10	2.6	5.87	2.26	3.8	125	0.09	17.1	0.11	103	1.22	0.035	5.2	0.038	16.3	< .01	7.04	3	0.5	105.1	0.02	6.3	0.011	0.06	1.8	24	< .2	52.1
RS-499 0040-0060	179	1.01	1.9	2.6	3	55.10	0.16	0.58	0.72	7.60	6.7	9.13	3.03	3.4	15	0.11	21.1	0.22	1388	1.31	0.046	14.2	0.103	16.53	0.01	2.72	3.4	< .1	37.3	< .02	4.7	0.031	0.07	1.9	36	< .2	146.6
RS-499 0060-0080	79	0.83	3.1	1.9	4	112.50	0.08	1.23	0.21	7.40	7.9	14.63	3.49	3.2	14	0.16	18.9	0.29	974	1.95	0.068	14.4	0.101	49.89	0.01	1.19	4.1	0.2	40.5	< .02	4.5	0.079	0.07	2	43	0.3	124.5
RS-499 0080-0100	73	0.97	2.0	1.6	3	80.60	0.25	1.48	0.23	5.70	7	8.27	3.26	3.6	8	0.16	17.5	0.37	987	1.7	0.06	11.7	0.088	9.34	< .01	1.72	4.1	0.1	47.2	< .02	4.3	0.072	0.07	2.1	44	0.2	100.4
RS-499 0100-0120	62	0.82	1.7	1.6	2	63.20	0.13	1.03	0.25	7.60	6.7	8.09	3.6	3.3	55	0.15	19.1	0.29	1219	1.7	0.069	34.1	0.092	8.59	0.02	3.11	4.1	< .1	42.4	< .02	5.1	0.064	0.06	2	41	0.2	160.1
RS-499 0120-0140	74	0.72	2.1	2.2	3	83.20	0.05	0.35	0.26	4.80	3.9	7.36	1.94	2.7	70	0.1	26.7	0.08	145	0.62	0.016	8.5	0.097	21.87	0.44	4.74	3	0.2	56	< .02	7.3	0.02	0.06	1.6	33	1.1	111.1
RS-499 0140-0160	111	0.73	1.3	1.3	< 1	163.00	0.06	0.44	0.19	3.70	5.3	5.65	2.25	2.6	17	0.1	22.1	0.11	558	0.85	0.024	13.5	0.086	13.12	0.02	5.81	3.2	< .1	59.8	< .02	6.1	0.024	0.04	1.4	35	0.6	133.3
RS-499 0160-0180	200	0.73	21.8	12.6	3	75.10	0.07	0.89	0.28	10.20	6.1	7.36	3.86	2.8	709	0.11	20.7	0.15	1062	2.72	0.025	41.5	0.101	9.83	2.24	10.61	2.9	1.5	29.3	< .02	5.7	0.019	0.31	1.8	28	0.4	87.9
RS-499 0180-0200	68	0.67	1.4	1.5	< 1	104.90	0.03	1.79	0.28	5.10	5.6	5.18	3	2.7	19	0.14	18.4	0.26	1025	1.46	0.045	24.7	0.085	7.11	0.05	2.38	2.8	0.1	51.8	< .02	4.5	0.045	0.07	2	38	< .2	94
RS-499 0200-0220	59	1.08	1.4	1.3	3	85.50	0.14	1.38	0.21	5.50	6	12.43	3.36	4.1	20	0.16	18.9	0.4	785	1.52	0.058	24.2	0.087	7.52	0.02	2.59	2.9	< .1	46.2	< .02	4.3	0.041	0.08	1.9	42	0.3	97.6
RS-499 0220-0240	65	0.9	1.1	1	3	68.80	0.05	1.21	0.17	6.40	5.9	7.13	3.33	3.5	9	0.15	17.3	0.56	823	1.51	0.055	18	0.087	5.39	< .01	0.88	2.7	< .1	37.4	< .02	3.7	0.05	0.06	1.7	42	< .2	95.2
RS-499 0240-0260	54	0.9	1.1	1.4	4	68.90	0.05	0.95	0.23	6.30	7.1	7.54	3.43	3.5	6	0.16	17.6	0.69	793	1.57	0.061	23.3	0.087	6.02	< .01	0.69	2.9	< .1	31	< .02	4	0.064	0.06	1.7	45	< .2	92.5
RS-499 0260-0280	44	0.82	1.2	1.1	< 1	69.20	0.03	0.84	0.14	6.40	6.8	6.75	3.44	3.4	9	0.14	17.4	0.61	817	1.7	0.059	27.6	0.088	5.72	0.01	0.44	3	< .1	30.4	< .02	4	0.062	0.05	1.6	45	< .2	86.5
RS-499 0280-0300	43	0.97	1.1	1.8	2	47.10	0.04	1.28	0.2	6.30	4.9	5.56	3.13	3.8	8	0.13	18.1	0.58	693	1.26	0.053	13	0.088	7.8	0.02	0.76	2.8	< .1	36.6	< .02	4.3	0.037	0.04	1.8	45	< .2	83.9
RS-499 0300-0320	43	0.85	1.3	0.7	< 1	47.30	0.03	1.32	0.18	6.20	6.3	8.17	3.3	3.4	< 5	0.14	17.3	0.48	790	1.68	0.064	17.3	0.087	6.11	0.05	1.65	2.9	< .1	35.5	< .02	3.9	0.054	0.05	1.8	44	< .2	92.4
RS-499 0320-0340	53	0.87	1.0	0.8	< 1	53.10	0.04	1.4	0.21	5.90	5.2	6.65	2.99	3.6	< 5	0.16	17.8	0.44	876	1.37	0.056	10	0.086	9.51	0.02	0.8	2.7	< .1	39.5	< .02	4.1	0.047	0.05	1.8	41	< .2	88.8
RS-499 0340-0360	48	0.84	1.0	1.4	2	52.80	0.03	1.43	0.2	6.20	5.6	6.53	3.07	3.5	6	0.15	17.9	0.49	762	1.52	0.072	19.3	0.089	7.14	0.01	0.91	2.8	< .1	37	< .02	4	0.06	0.05	1.8	43	< .2	92
RS-499 0360-0380	162	1.06	1.0	1.3	2	66.70	0.07	1.18	0.16	6.00	6	5.79	3.03	4	8	0.16	17.4	0.68	765	1.58	0.069	13.2	0.082	19.3	0.01	0.66	2.9	< .1	39.5	< .02	4.2	0.048	0.05	1.7	41	< .2	86.9
RS-499 0380-0400	123	0.93	1.1	1.3	4	66.50	0.04	1.07	0.2	6.20	8.5	10.99	3.32	3.7	13	0.16	16.8	0.68	722	1.87	0.083	20.5	0.085	11.24	0.01	0.56	3.2	< .1	36.2	< .02	4	0.076	0.05	1.6	45	< .2	93.6
RS-499 0400-0420	84	1.05	0.9	1.9	2	64.70	0.03	1.65	0.18	5.90	7.2	5.6	2.94	4.4	7	0.13	19.2	0.41	1036	1.44	0.052	9.2	0.09	9.13	0.02	1.63	2.9	< .1	46.1	< .02	5.1	0.052	0.05	1.9	38	< .2	90.8
RS-499 0420-0440	92	1.23	1.5	1.1	3	75.30	0.05	1.28	0.17	6.50	9	8.75	3.83	4.7	12	0.17	17.8	0.68	1162	2.3	0.084	47.9	0.085	8	0.01	0.4	3.2	< .1	42.5	< .02	4.7	0.078	0.05	1.9	44	< .2	94.1
RS-499 0440-0460	74	1.06	1.1	0.9	2	58.20	0.04	1.45	0.19	5.90	6.1	6.59	3.17	4.1	10	0.13	18.1	0.36	1091	1.7	0.054	27.7	0.084	8.3	0.03	1.46	2.8	< .1	48.7	< .02	5.2	0.06	0.04	1.7	37	< .2	90.1
RS-499 0460-0480	111	0.99	1.1	0.9	1	85.00	0.03	1.55	0.16	4.80	6.1	6.83	2.9	4.2	9	0.13	16.7	0.23	988	2.09	0.064	24.4	0.073	5.85	0.03	1.46	2.5	< .1	54.9	< .02	5.8	0.07	0.05	1.7	26	< .2	85.6
RS-499 0480-0500	68	0.88	1.8	1.3	< 1	46.40	0.02	1.13	0.09	3.10	5.1	5.55	2.64	4	27	0.11	14.5	0.17	698	2.01	0.055	24	0.057	5.38	0.49	0.76	1.5	< .1	52.9	< .02	7	0.051	0.05	1.7	11	0.3	83
RS-499 0500-0520	38	0.91	1.5	1.1	< 1	47.90	0.04	1.28	0.11	1.70	3.4	3.58	2.38	4.1	14	0.11	13.9	0.19	796	1.09	0.05	16.1	0.059	5.35	0.15	0.61	1.4	< .1	57.9	< .02	7.2	0.026	0.05	1.3	8	0.2	70.9
RS-499 0520-0540	89	0.92	1.6	1.3	1	61.70	0.04	0.96	0.09	2.40	5.4	6.8	2.56	4.8	9	0.14	13.9	0.22	780	1.42	0.065	18.6	0.05	4.92	0.02	0.47	1.5	< .1	54.5	< .02	8.2	0.041	0.05	1.4	9	0.3	79.4
RS-499 0540-0560	54	0.98	4.1	3.2	3	65.20	0.02	1.03	0.15	2.50	3.9	4.79	2.59	5.9	6	0.15	15.4	0.25	1080	1.31	0.078	15.9	0.049	8.41	0.01	0.35	1.8	< .1	62.1	< .02	8.7	0.05	0.06	1	7	0.3	78.7
RS-499 0560-0580	47	0.9	3.3	2.2	3	63.10	0.02	0.86	0.16	2.80	4.3	4.95	2.82	5.3	6	0.17	14.1	0.24	893	1.23	0.081	27.1	0.049	11.4	0.01	0.35	1.7	< .1	57	< .02	8.7	0.048	0.06	0.8	8	0.2	80.9
RS-499 0580-0600	45	0.86	2	1.3	3.0	63.00	0.1	0.66	0.08	2.70	7.5	7.21	3.31	4.9	< 5	0.23	15.5	0.22	643	2.09	0.083	63.5	0.047	5.12	< .01	0.36	1.6	< .1	51.2	< .02	9.5	0.063	0.1	1.1	9	0.2	85.6
RS-499 0600-0620	86	0.98	2.9	1.3	6	92.9	0.14	0.73	0.12	2.9	10.8	13	4.47	5.7	11	0.33	17.5	0.22	936	2.94	0.126	146.3	0.046	5.9	< .01	0.32	2	< .1	47.8	< .02	10.8	0.076	0.12	1.5	13	0.3	90.4
RS-499 0620-0640	73	0.78	4.6	1.4	2	96.6	0.15	0.48	0.1	2.8	7.4	9.44	3.02	5	23	0.24	19.2	0.12	603	1.79	0.129	56.4	0.039	14.74	< .01	0.44	1.5	< .1	46.9	< .02	10.1	0.056	0.07	1.1	12	0.4	80.9
RS-499 0640-0660	59	0.95	4.2	1.1	5	79.2	0.03	0.5	0.08	2.1	3.3	6.08	2.71	6	7	0.2	20.5	0.14	421	0.67	0.103	15.3	0.023	11	< .01	0.5	1.5	< .1	67	< .02	8.8	0.033	0.06	1.2	10	0.4	68.9
RS-499 0660-0680	161	0.91	2.7	0.9	3	94.5	0.04	0.52	0.07	2.3	3.8	5.89	2.53	5.8	8	0.25	20.2	0.12	580	1.18	0.117	18.8	0.033	12.03	< .01	0.45	1.3	< .1	54.1	< .02	8.9	0.052	0.08	1.3	9	0.5	82.9
STANDARD DS2	273	1.72	58.9	242.8	3	148.9	10.9	0.53	10.54	11.5	159.5	127.68	3.08	6.2	237	0.16	16.3	0.61	840	13.99	0.032	35.6	0.091	33.21	< .01	8.81	2.7	2.2	28.5	1.83	3.6	0.095	1.81	17.5	74	6.8	162

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CLIENT: HECLA MINING CO.
CLIENT REF: KURT ALLEN
AAL REF: SP57428
METHOD: AAL03-0

ELEMENT	Ag	Al	As	Au	B	Ba	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	Hg	K	La	Mg	Mn	Mo	Na	Ni	P	Pb	S	Sb	Sc	Se	Sr	Te	Th	Ti	Tl	U	V	W	Zn
SAMPLES	ppb	%	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppb	%	ppm	%	ppm	ppm	%	ppm	%	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm
RS-499 0680-0700	122	0.74	2.2	1.5	2	130.3	0.07	0.41	0.15	2.5	5.6	8.56	2.79	4.7	24	0.24	16.8	0.11	684	1.74	0.135	34.1	0.034	11.08	< .01	0.55	1.2	< .1	44.2	< .02	6.9	0.064	0.09	2	10	0.9	78.8
RS-499 0700-0720	133	1.36	1.7	1.2	3	316.4	0.11	0.65	0.14	2.5	6.8	7.47	2.66	5.5	35	0.22	19.8	0.33	539	1.63	0.127	28.5	0.038	11.04	< .01	0.29	1.5	0.2	141.7	< .02	5.8	0.051	0.1	2	14	0.3	75.6
RS-499 0720-0740	79	1.6	1.8	0.6	5	110	0.25	0.9	0.12	2.2	4.2	4.42	2.59	5.9	13	0.27	24.1	0.33	567	1.25	0.104	19.8	0.03	9.88	< .01	0.25	1.5	< .1	163.4	< .02	7.3	0.026	0.13	1.1	10	< .2	80.4
RS-499 0740-0760	67	1.37	2	0.9	3	79.5	0.34	1.21	0.17	1.6	4.6	5.13	2.4	5.2	< 5	0.26	21.4	0.24	785	1.51	0.078	20.8	0.035	10.7	< .01	0.34	1.2	< .1	132.1	< .02	7.3	0.017	0.13	2.1	7	< .2	81.8
RS-499 0760-0780	88	1.65	1.1	0.5	1	77.4	0.39	1.56	0.64	2.3	4.7	3.34	2.03	5.6	15	0.27	24.3	0.26	826	1	0.067	16.8	0.042	10.69	< .01	0.17	1.2	< .1	175.2	0.02	7.2	0.006	0.11	2.5	9	< .2	71.4
RS-499 0780-0800	126	1.48	1.2	0.2	1	98.4	0.25	1.62	0.12	1.9	4.9	4.84	2.22	5.3	< 5	0.27	27	0.21	1034	1.25	0.067	23.6	0.044	12.03	< .01	0.21	1	< .1	144.4	0.02	7.8	0.004	0.09	1.5	6	< .2	56.2
RS-499 0800-0820	85	1.91	1.2	0.5	2	78.5	0.14	1.88	0.22	1.7	2.3	2.48	1.84	6.4	< 5	0.3	28.7	0.26	934	0.68	0.06	15.4	0.042	11.11	< .01	0.1	1	< .1	196.4	0.02	7.4	0.001	0.1	1.9	5	< .2	58.7
RS-499 0820-0840	109	1.39	1.2	0.2	2	100	0.24	1.46	0.23	1.5	5.4	4.22	2.06	5.4	8	0.31	27.9	0.17	793	1.17	0.073	19.2	0.04	12.7	< .01	0.27	0.9	< .1	126.4	< .02	7.6	0.008	0.1	1.4	4	0.2	60.7
RS-499 0840-0860	117	1.29	1.3	0.7	1	281.7	0.3	1.64	0.11	1.5	4.1	5.62	2.21	6	155	0.38	22.6	0.13	625	1.46	0.088	14.3	0.044	12.55	0.03	0.34	0.8	< .1	93.6	< .02	7	0.035	0.11	1.3	4	0.5	77
RS-499 0860-0880	971	1.53	3.4	489.9	2	245.1	0.29	3.57	0.35	1.9	1.8	3.23	2.17	4.8	195	0.34	26.4	0.12	1145	1.33	0.023	3	0.053	22.43	0.47	0.95	0.6	1.8	150.8	< .02	6	0.007	0.14	1.3	3	0.2	68.6
RS-499 0880-0900	6832	0.71	27.8	183.1	1	47.4	0.15	0.35	0.25	0.2	4.3	5.17	2.17	2.4	120	0.29	25.2	0.03	708	1.32	0.013	18.7	0.011	34	2.34	6.46	0.3	16.2	36.9	< .02	7.6	< .001	0.23	1	2	0.2	81.5
RS-499 0900-0920	2281	0.69	14	37.6	1	54.8	0.06	0.28	0.27	< .1	3.2	3.42	2.2	2.5	175	0.33	26.8	0.02	1278	2.91	0.013	16.9	0.007	33.25	2.43	3.34	0.4	8.8	32.1	< .02	8.1	< .001	0.45	0.9	2	0.2	93.7
RS-499 0920-0940	716	0.78	6.2	25.9	1	46.7	0.11	0.21	0.28	< .1	4.3	4.19	2.42	2.5	161	0.41	27.6	0.02	506	3.33	0.012	17.6	0.007	31.24	2.66	4.08	0.4	4.3	27.9	0.02	8.4	0.002	0.64	0.9	< 2	0.2	93.6
RS-499 0940-0960	3665	0.73	34.8	40.5	< 1	40.6	0.19	0.18	0.27	< .1	4.7	4.34	2.38	2.3	129	0.33	26.3	0.02	154	1.49	0.01	20.4	0.005	35.08	2.7	6.13	0.3	20.7	22.6	< .02	8.5	< .001	0.27	0.9	< 2	0.4	84.2
RS-499 0960-0980	2102	0.68	29.5	47.7	< 1	28.9	0.17	0.22	0.2	0.1	4.8	5.61	2.17	2.2	122	0.31	25	0.02	153	2.03	0.01	29.1	0.006	32.61	2.04	5.15	0.4	14.4	24.8	< .02	8.1	< .001	0.28	0.9	2	0.2	74.6
RS-499 0980-1000	1419	0.62	20.8	21.8	1	20.5	0.08	0.17	0.14	0.1	5.8	4.78	1.82	1.8	96	0.31	23.6	0.02	312	3.73	0.01	29.8	0.006	27.24	1.62	3.95	0.4	8.1	19.2	< .02	8.4	< .001	0.25	1.4	2	0.2	71.9
RS-499 1000-1020	2296	0.63	19.3	213.8	1	47.8	0.09	0.63	0.15	0.2	6.4	5.34	2.04	2.3	92	0.31	30.2	0.03	545	2.02	0.021	22.1	0.007	36.61	1.69	3.09	0.5	7.5	37	< .02	10.1	< .001	0.27	1.1	2	0.3	82.8
RS-499 1020-1040	2046	0.57	17.7	43.6	< 1	30	0.09	0.58	0.43	0.1	6.7	6.02	2.08	2.4	93	0.29	33.5	0.03	372	2.27	0.033	32.4	0.007	44.64	1.41	2.54	0.5	7.1	42.1	< .02	11.4	0.001	0.19	1.2	2	0.3	82.2
RS-499 1040-1060	1914	0.68	18	19.9	< 1	26.3	0.07	0.45	0.19	< .1	9.3	6.1	2.04	2.9	83	0.31	35.5	0.02	365	2.66	0.035	29.8	0.007	28.11	1.39	2.92	0.5	7.7	33.5	< .02	11.8	0.001	0.19	1.1	2	0.2	86.8
RS-499 1060-1080	920	0.92	11.4	5	2	30.6	0.07	0.64	0.81	0.1	10.1	8.2	2.45	4.1	55	0.4	37.7	0.03	757	3.9	0.045	82.9	0.007	17.44	0.74	1.79	0.6	3.9	35.3	< .02	12.8	< .001	0.16	1.9	4	0.2	77.9
RS-499 1080-1100	1148	0.94	10.3	13.1	< 1	39.7	0.08	0.36	0.33	< .1	7.1	6.01	2.27	3.7	58	0.47	41.1	0.02	737	3.11	0.024	58.9	0.007	23.22	1.61	5.45	0.5	7.9	30.9	< .02	14.4	< .001	0.36	1.8	2	0.3	78.6
RS-499 1100-1120	1018	0.88	11.6	21.5	2	39.8	0.06	0.23	0.19	< .1	6.7	5.48	2.06	3.1	58	0.43	38.8	0.03	454	2.95	0.021	44.2	0.006	22.28	1.66	4.34	0.4	5.7	29	< .02	13.6	< .001	0.28	1.6	2	0.3	74.4
RS-499 1120-1140	747	0.83	7.6	25.5	< 1	38	0.05	0.3	0.15	< .1	4.1	4.36	1.77	2.7	83	0.39	37.9	0.03	814	2.57	0.03	28.6	0.006	25.02	1.53	4.62	0.4	4.1	34.5	< .02	14.5	< .001	0.32	2.3	2	0.2	77.1
RS-499 1140-1160	502	0.82	6.1	6.2	1	49.1	0.05	1.04	0.2	0.1	4.1	5.32	1.51	3.3	49	0.4	42.7	0.02	958	2.18	0.031	34.2	0.007	19.21	0.57	1.32	0.6	1.9	52.2	< .02	14.6	< .001	0.14	3.4	2	< .2	77.7
RS-499 1160-1180	907	0.72	8.8	13.6	2	78.3	0.04	0.33	0.14	< .1	5.7	5.16	1.64	2.5	68	0.36	40.7	0.02	334	2.61	0.027	33.8	0.006	20.56	1.35	4.54	0.3	4.5	32.7	< .02	14.7	0.001	0.27	3.2	< 2	0.3	70.8
RS-499 1180-1200	1172	0.74	15.8	24.7	1	34.4	0.04	0.19	0.15	< .1	7.1	5.46	1.85	2.7	114	0.35	38.7	0.02	432	2.69	0.021	40.5	0.006	22.02	1.49	5.6	0.4	7.7	29.9	< .02	13.8	< .001	0.36	2.1	2	0.3	72.7
RS-499 1200-1220	738	0.76	10.6	28.7	1	42.7	0.05	0.18	0.13	< .1	5.3	8.39	1.9	2.8	58	0.35	38.8	0.01	690	2.78	0.024	38.7	0.006	22.06	1.65	5.96	0.4	5.3	29.6	< .02	13.8	< .001	0.28	2	< 2	0.3	77.5
RS-499 1220-1240	1068	0.68	14	24.4	1	27.8	0.04	0.21	0.26	0.1	6.6	5.02	1.95	2.2	75	0.3	38.8	0.02	417	2.82	0.02	27.7	0.006	23.4	1.7	5.34	0.3	6.8	35.5	< .02	13.4	< .001	0.31	3.6	< 2	0.4	75.9
RS-499 1240-1260	888	0.88	12.1	15	< 1	51.8	0.04	0.25	0.35	0.1	6.7	5.21	1.81	3.1	94	0.4	41.2	0.02	407	2.56	0.021	31.4	0.006	22	1.52	4.34	0.5	4.7	35.6	< .02	14.1	0.002	0.32	2.5	2	0.3	98.7
RS-499 1260-1280	538	0.77	7.6	5.6	2	42.4	0.05	0.43	0.13	0.1	8.7	6.38	2.13	3.1	47	0.4	43.3	0.02	619	3.66	0.034	59.8	0.007	17.11	1.24	3.2	0.6	2.2	35.1	< .02	15	< .001	0.34	1.7	3	0.3	75.6
RS-499 1280-1300	799	0.92	8.9	7.4	1	42.6	0.04	0.29	0.14	0.1	6.5	6.15	1.92	3.4	96	0.41	43.1	0.02	360	3.37	0.033	48.5	0.006	20.11	1.41	2.53	0.6	3.3	36.3	< .02	14.9	< .001	0.26	1.7	2	0.3	80.4
RS-499 1300-1320	1399	0.67	17.8	68	1	40.6	0.12	0.41	0.16	0.1	7.4	8.55	2.16	2.4	82	0.31	35.6	0.02	494	2.46	0.03	51.1	0.006	22.34	1.41	2.96	0.5	7	44.7	< .02	11.5	< .001	0.19	1.2	2	0.3	76.4
RS-499 1320-1335	875	0.67	10.1	7.8	1	57	0.03	0.88	0.18	0.1	9.6	6.36	1.78	2.9	58	0.28	40.5	0.06	742	3.6	0.057	30.6	0.006	19.48	0.53	1.46	0.8	3.3	60	< .02	13.3	< .001	0.13	2.8	2	0.2	73.9
34763	32458	0.85	61.7	2436.9	< 1	79.6	0.6	0.82	0.2	2.5	22.5	11.62	1.76	2.4	200	0.35	17	0.09	239	8.33	0.027	11.1	0.059	20.5	2.02	10.65	0.4	18.2	77.1	0.03	3.3	< .001	0.3	0.6	3	0.3	75.7
STANDARD DS2	271	1.69	57.2	196.9	3	147.5	10.54	0.53	10	11.3	159.9	127.33	3.02	6.1	221	0.15	15.8	0.59	823	13.72	0.032	36.1	0.089	32.5	< .01	8.38	2.7	2.2	28.6	1.76	3.5	0.093	1.77	17.9	73	6.5	159

AMERICAN ASSAY LABORATORIES
AAL 03-0 ICP PACKAGE DETECTION LIMITS

ELEMENT	Ag	Al	As	B	Ba	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	Hg	K	La	Mg	Mn	Mo	Na	Ni	P	Pb	Sb	Se	Sr	Te	Th	Ti	Tl	U	V	W	Zn
SAMPLES	ppb	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppb	%	ppm	%	ppm	ppm	%	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm
	30	0.01	0.5	3	1	0.1	0.01	.01	1	1	0.2	0.01	0.5	10	0.01	1	0.01	2	0.1	0.01	1	0.001	0.3	0.2	0.4	1	0.2	2	0.01	0.2	5	1	2	1

5.0 GRAMS OF PULP IS DIGESTED WITH HYDROCHLORIC AND NITRIC ACID AT 95 DEGREE CENTIGRADE FOR ONE HOUR.
DIGEST IS PARTIAL FOR Al, B, Ba, Ca, Co, Cr, Fe, K, La, Mg, Mn, Na, Ni, P, Sr, Th, Ti, U, V AND W.
ORGANIC SOLUTION EXTRACTION AND ULTRASONIC ICP FOR Ag, As, Bi, Cd, Cu, Ga, Mo, Pb, Sb, Se, Te AND Tl.
Hg BY COLD VAPOR AAS.

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FAX: (775) 356-1413

CLIENT:	HECLA MINING CO.
CLIENT REF:	KURT ALLEN
AAL REF:	SP57428
METHOD:	AAL03-0

ELEMENT	Ag	Al	As	Au	B	Ba	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	Hg	K	La	Mg	Mn	Mo	Na	Ni	P	Pb	S	Sb	Sc	Se	Sr	Te	Th	Ti	Tl	U	V	W	Zn
SAMPLES	ppb	%	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppb	%	ppm	%	ppm	ppm	%	ppm	%	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm
RS-499 0000-0020	40	1.33	6	2.8	7	82.30	0.14	0.69	0.58	4.30	3.6	7.38	2.38	4.3	132	0.11	17.1	0.16	177	1.14	0.056	7.7	0.026	18.88	< .01	4.08	2.1	< .1	73.1	< .02	5.9	0.052	0.08	2.3	24	< .2	88.2
RS-499 0020-0040	42	1.1	4.2	11.9	3	125.30	0.12	0.34	0.69	5.10	2.6	5.87	2.26	3.8	125	0.09	17.1	0.11	103	1.22	0.035	5.2	0.038	16.3	< .01	7.04	3	0.5	105.1	0.02	6.3	0.011	0.06	1.8	24	< .2	52.1
RS-499 0040-0060	179	1.01	1.9	2.6	3	55.10	0.16	0.58	0.72	7.60	6.7	9.13	3.03	3.4	15	0.11	21.1	0.22	1388	1.31	0.046	14.2	0.103	16.53	0.01	2.72	3.4	< .1	37.3	< .02	4.7	0.031	0.07	1.9	36	< .2	146.6
RS-499 0060-0080	79	0.83	3.1	1.9	4	112.50	0.08	1.23	0.21	7.40	7.9	14.63	3.49	3.2	14	0.16	18.9	0.29	974	1.95	0.068	14.4	0.101	49.89	0.01	1.19	4.1	0.2	40.5	< .02	4.5	0.079	0.07	2	43	0.3	124.5
RS-499 0080-0100	73	0.97	2.0	1.6	3	80.60	0.25	1.48	0.23	5.70	7	8.27	3.26	3.6	8	0.16	17.5	0.37	987	1.7	0.06	11.7	0.088	9.34	< .01	1.72	4.1	0.1	47.2	< .02	4.3	0.072	0.07	2.1	44	0.2	100.4
RS-499 0100-0120	62	0.82	1.7	1.6	2	63.20	0.13	1.03	0.25	7.60	6.7	8.09	3.6	3.3	55	0.15	19.1	0.29	1219	1.7	0.069	34.1	0.092	8.59	0.02	3.11	4.1	< .1	42.4	< .02	5.1	0.064	0.06	2	41	0.2	160.1
RS-499 0120-0140	74	0.72	2.1	2.2	3	83.20	0.05	0.35	0.26	4.80	3.9	7.36	1.94	2.7	70	0.1	26.7	0.08	145	0.62	0.016	8.5	0.097	21.87	0.44	4.74	3	0.2	56	< .02	7.3	0.02	0.06	1.6	33	1.1	111.1
RS-499 0140-0160	111	0.73	1.3	1.3	< 1	163.00	0.06	0.44	0.19	3.70	5.3	5.65	2.25	2.6	17	0.1	22.1	0.11	558	0.85	0.024	13.5	0.086	13.12	0.02	5.81	3.2	< .1	59.8	< .02	6.1	0.024	0.04	1.4	35	0.6	133.3
RS-499 0160-0180	200	0.73	21.8	12.6	3	75.10	0.07	0.89	0.28	10.20	6.1	7.36	3.86	2.8	709	0.11	20.7	0.15	1062	2.72	0.025	41.5	0.101	9.83	2.24	10.61	2.9	1.5	29.3	< .02	5.7	0.019	0.31	1.8	28	0.4	87.9
RS-499 0180-0200	68	0.67	1.4	1.5	< 1	104.90	0.03	1.79	0.28	5.10	5.6	5.18	3	2.7	19	0.14	18.4	0.26	1025	1.46	0.045	24.7	0.085	7.11	0.05	2.38	2.8	0.1	51.8	< .02	4.5	0.045	0.07	2	38	< .2	94
RS-499 0200-0220	59	1.08	1.4	1.3	3	85.50	0.14	1.38	0.21	5.50	6	12.43	3.36	4.1	20	0.16	18.9	0.4	785	1.52	0.058	24.2	0.087	7.52	0.02	2.59	2.9	< .1	46.2	< .02	4.3	0.041	0.08	1.9	42	0.3	97.6
RS-499 0220-0240	65	0.9	1.1	1	3	68.80	0.05	1.21	0.17	6.40	5.9	7.13	3.33	3.5	9	0.15	17.3	0.56	823	1.51	0.055	18	0.087	5.39	< .01	0.88	2.7	< .1	37.4	< .02	3.7	0.05	0.06	1.7	42	< .2	95.2
RS-499 0240-0260	54	0.9	1.1	1.4	4	68.90	0.05	0.95	0.23	6.30	7.1	7.54	3.43	3.5	6	0.16	17.6	0.69	793	1.57	0.061	23.3	0.087	6.02	< .01	0.69	2.9	< .1	31	< .02	4	0.064	0.06	1.7	45	< .2	92.5
RS-499 0260-0280	44	0.82	1.2	1.1	< 1	69.20	0.03	0.84	0.14	6.40	6.8	6.75	3.44	3.4	9	0.14	17.4	0.61	817	1.7	0.059	27.6	0.088	5.72	0.01	0.44	3	< .1	30.4	< .02	4	0.062	0.05	1.6	45	< .2	86.5
RS-499 0280-0300	43	0.97	1.1	1.8	2	47.10	0.04	1.28	0.2	6.30	4.9	5.56	3.13	3.8	8	0.13	18.1	0.58	693	1.26	0.053	13	0.088	7.8	0.02	0.76	2.8	< .1	36.6	< .02	4.3	0.037	0.04	1.8	45	< .2	83.9
RS-499 0300-0320	43	0.85	1.3	0.7	< 1	47.30	0.03	1.32	0.18	6.20	6.3	8.17	3.3	3.4	< 5	0.14	17.3	0.48	790	1.68	0.064	17.3	0.087	6.11	0.05	1.65	2.9	< .1	35.5	< .02	3.9	0.054	0.05	1.8	44	< .2	92.4
RS-499 0320-0340	53	0.87	1.0	0.8	< 1	53.10	0.04	1.4	0.21	5.90	5.2	6.65	2.99	3.6	< 5	0.16	17.8	0.44	876	1.37	0.056	10	0.086	9.51	0.02	0.8	2.7	< .1	39.5	< .02	4.1	0.047	0.05	1.8	41	< .2	88.8
RS-499 0340-0360	48	0.84	1.0	1.4	2	52.80	0.03	1.43	0.2	6.20	5.6	6.53	3.07	3.5	6	0.15	17.9	0.49	762	1.52	0.072	19.3	0.089	7.14	0.01	0.91	2.8	< .1	37	< .02	4	0.06	0.05	1.8	43	< .2	92
RS-499 0360-0380	162	1.06	1.0	1.3	2	66.70	0.07	1.18	0.16	6.00	6	5.79	3.03	4	8	0.16	17.4	0.68	765	1.58	0.069	13.2	0.082	19.3	0.01	0.66	2.9	< .1	39.5	< .02	4.2	0.048	0.05	1.7	41	< .2	86.9
RS-499 0380-0400	123	0.93	1.1	1.3	4	66.50	0.04	1.07	0.2	6.20	8.5	10.99	3.32	3.7	13	0.16	16.8	0.68	722	1.87	0.083	20.5	0.085	11.24	0.01	0.56	3.2	< .1	36.2	< .02	4	0.076	0.05	1.6	45	< .2	93.6
RS-499 0400-0420	84	1.05	0.9	1.9	2	64.70	0.03	1.65	0.18	5.90	7.2	5.6	2.94	4.4	7	0.13	19.2	0.41	1036	1.44	0.052	9.2	0.09	9.13	0.02	1.63	2.9	< .1	46.1	< .02	5.1	0.052	0.05	1.9	38	< .2	90.8
RS-499 0420-0440	92	1.23	1.5	1.1	3	75.30	0.05	1.28	0.17	6.50	9	8.75	3.83	4.7	12	0.17	17.8	0.68	1162	2.3	0.084	47.9	0.085	8	0.01	0.4	3.2	< .1	42.5	< .02	4.7	0.078	0.05	1.9	44	< .2	94.1
RS-499 0440-0460	74	1.06	1.1	0.9	2	58.20	0.04	1.45	0.19	5.90	6.1	6.59	3.17	4.1	10	0.13	18.1	0.36	1091	1.7	0.054	27.7	0.084	8.3	0.03	1.46	2.8	< .1	48.7	< .02	5.2	0.06	0.04	1.7	37	< .2	90.1
RS-499 0460-0480	111	0.99	1.1	0.9	1	85.00	0.03	1.55	0.16	4.80	6.1	6.83	2.9	4.2	9	0.13	16.7	0.23	988	2.09	0.064	24.4	0.073	5.85	0.03	1.46	2.5	< .1	54.9	< .02	5.8	0.07	0.05	1.7	26	< .2	85.6
RS-499 0480-0500	68	0.88	1.8	1.3	< 1	46.40	0.02	1.13	0.09	3.10	5.1	5.55	2.64	4	27	0.11	14.5	0.17	698	2.01	0.055	24	0.057	5.38	0.49	0.76	1.5	< .1	52.9	< .02	7	0.051	0.05	1.7	11	0.3	83
RS-499 0500-0520	38	0.91	1.5	1.1	< 1	47.90	0.04	1.28	0.11	1.70	3.4	3.58	2.38	4.1	14	0.11	13.9	0.19	796	1.09	0.05	16.1	0.059	5.35	0.15	0.61	1.4	< .1	57.9	< .02	7.2	0.026	0.05	1.3	8	0.2	70.9
RS-499 0520-0540	89	0.92	1.6	1.3	1	61.70	0.04	0.96	0.09	2.40	5.4	6.8	2.56	4.8	9	0.14	13.9	0.22	780	1.42	0.065	18.6	0.05	4.92	0.02	0.47	1.5	< .1	54.5	< .02	8.2	0.041	0.05	1.4	9	0.3	79.4
RS-499 0540-0560	54	0.98	4.1	3.2	3	65.20	0.02	1.03	0.15	2.50	3.9	4.79	2.59	5.9	6	0.15	15.4	0.25	1080	1.31	0.078	15.9	0.049	8.41	0.01	0.35	1.8	< .1	62.1	< .02	8.7	0.05	0.06	1	7	0.3	78.7
RS-499 0560-0580	47	0.9	3.3	2.2	3	63.10	0.02	0.86	0.16	2.80	4.3	4.95	2.82	5.3	6	0.17	14.1	0.24	893	1.23	0.081	27.1	0.049	11.4	0.01	0.35	1.7	< .1	57	< .02	8.7	0.048	0.06	0.8	8	0.2	80.9
RS-499 0580-0600	45	0.86	2	1.3	3.0	63.00	0.1	0.66	0.08	2.70	7.5	7.21	3.31	4.9	< 5	0.23	15.5	0.22	643	2.09	0.083	63.5	0.047	5.12	< .01	0.36	1.6	< .1	51.2	< .02	9.5	0.063	0.1	1.1	9	0.2	85.6
RS-499 0600-0620	86	0.98	2.9	1.3	6	92.9	0.14	0.73	0.12	2.9	10.8	13	4.47	5.7	11	0.33	17.5	0.22	936	2.94	0.126	146.3	0.046	5.9	< .01	0.32	2	< .1	47.8	< .02	10.8	0.076	0.12	1.5	13	0.3	90.4
RS-499 0620-0640	73	0.78	4.6	1.4	2	96.6	0.15	0.48	0.1	2.8	7.4	9.44	3.02	5	23	0.24	19.2	0.12	603	1.79	0.129	56.4	0.039	14.74	< .01	0.44	1.5	< .1	46.9	< .02	10.1	0.056	0.07	1.1	12	0.4	80.9
RS-499 0640-0660	59	0.95	4.2	1.1	5	79.2	0.03	0.5	0.08	2.1	3.3	6.08	2.71	6	7	0.2	20.5	0.14	421	0.67	0.103	15.3	0.023	11	< .01	0.5	1.5	< .1	67	< .02	8.8	0.033	0.06	1.2	10	0.4	68.9
RS-499 0660-0680	161	0.91	2.7	0.9	3	94.5	0.04	0.52	0.07	2.3	3.8	5.89	2.53	5.8	8	0.25	20.2	0.12	580	1.18	0.117	18.8	0.033	12.03	< .01	0.45	1.3	< .1	54.1	< .02	8.9	0.052	0.08	1.3	9	0.5	82.9
STANDARD DS2	273	1.72	58.9	242.8	3	148.9	10.9	0.53	10.54	11.5	159.5	127.68	3.08	6.2	237	0.16	16.3	0.61	840	13.99	0.032	35.6	0.091	33.21	< .01	8.81	2.7	2.2	28.5	1.83	3.6	0.095	1.81	17.5	74	6.8	162

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CLIENT: HECLA MINING CO.
CLIENT REF: KURT ALLEN
AAL REF: SP57428
METHOD: AAL03-0

ELEMENT	Ag	Al	As	Au	B	Ba	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	Hg	K	La	Mg	Mn	Mo	Na	Ni	P	Pb	S	Sb	Sc	Se	Sr	Te	Th	Ti	Tl	U	V	W	Zn
SAMPLES	ppb	%	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppb	%	ppm	%	ppm	ppm	%	ppm	%	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm
RS-499 0680-0700	122	0.74	2.2	1.5	2	130.3	0.07	0.41	0.15	2.5	5.6	8.56	2.79	4.7	24	0.24	16.8	0.11	684	1.74	0.135	34.1	0.034	11.08	< .01	0.55	1.2	< .1	44.2	< .02	6.9	0.064	0.09	2	10	0.9	78.8
RS-499 0700-0720	133	1.36	1.7	1.2	3	316.4	0.11	0.65	0.14	2.5	6.8	7.47	2.66	5.5	35	0.22	19.8	0.33	539	1.63	0.127	28.5	0.038	11.04	< .01	0.29	1.5	0.2	141.7	< .02	5.8	0.051	0.1	2	14	0.3	75.6
RS-499 0720-0740	79	1.6	1.8	0.6	5	110	0.25	0.9	0.12	2.2	4.2	4.42	2.59	5.9	13	0.27	24.1	0.33	567	1.25	0.104	19.8	0.03	9.88	< .01	0.25	1.5	< .1	163.4	< .02	7.3	0.026	0.13	1.1	10	< .2	80.4
RS-499 0740-0760	67	1.37	2	0.9	3	79.5	0.34	1.21	0.17	1.6	4.6	5.13	2.4	5.2	< 5	0.26	21.4	0.24	785	1.51	0.078	20.8	0.035	10.7	< .01	0.34	1.2	< .1	132.1	< .02	7.3	0.017	0.13	2.1	7	< .2	81.8
RS-499 0760-0780	88	1.65	1.1	0.5	1	77.4	0.39	1.56	0.64	2.3	4.7	3.34	2.03	5.6	15	0.27	24.3	0.26	826	1	0.067	16.8	0.042	10.69	< .01	0.17	1.2	< .1	175.2	0.02	7.2	0.006	0.11	2.5	9	< .2	71.4
RS-499 0780-0800	126	1.48	1.2	0.2	1	98.4	0.25	1.62	0.12	1.9	4.9	4.84	2.22	5.3	< 5	0.27	27	0.21	1034	1.25	0.067	23.6	0.044	12.03	< .01	0.21	1	< .1	144.4	0.02	7.8	0.004	0.09	1.5	6	< .2	56.2
RS-499 0800-0820	85	1.91	1.2	0.5	2	78.5	0.14	1.88	0.22	1.7	2.3	2.48	1.84	6.4	< 5	0.3	28.7	0.26	934	0.68	0.06	15.4	0.042	11.11	< .01	0.1	1	< .1	196.4	0.02	7.4	0.001	0.1	1.9	5	< .2	58.7
RS-499 0820-0840	109	1.39	1.2	0.2	2	100	0.24	1.46	0.23	1.5	5.4	4.22	2.06	5.4	8	0.31	27.9	0.17	793	1.17	0.073	19.2	0.04	12.7	< .01	0.27	0.9	< .1	126.4	< .02	7.6	0.008	0.1	1.4	4	0.2	60.7
RS-499 0840-0860	117	1.29	1.3	0.7	1	281.7	0.3	1.64	0.11	1.5	4.1	5.62	2.21	6	155	0.38	22.6	0.13	625	1.46	0.088	14.3	0.044	12.55	0.03	0.34	0.8	< .1	93.6	< .02	7	0.035	0.11	1.3	4	0.5	77
RS-499 0860-0880	971	1.53	3.4	489.9	2	245.1	0.29	3.57	0.35	1.9	1.8	3.23	2.17	4.8	195	0.34	26.4	0.12	1145	1.33	0.023	3	0.053	22.43	0.47	0.95	0.6	1.8	150.8	< .02	6	0.007	0.14	1.3	3	0.2	68.6
RS-499 0880-0900	6832	0.71	27.8	183.1	1	47.4	0.15	0.35	0.25	0.2	4.3	5.17	2.17	2.4	120	0.29	25.2	0.03	708	1.32	0.013	18.7	0.011	34	2.34	6.46	0.3	16.2	36.9	< .02	7.6	< .001	0.23	1	2	0.2	81.5
RS-499 0900-0920	2281	0.69	14	37.6	1	54.8	0.06	0.28	0.27	< .1	3.2	3.42	2.2	2.5	175	0.33	26.8	0.02	1278	2.91	0.013	16.9	0.007	33.25	2.43	3.34	0.4	8.8	32.1	< .02	8.1	< .001	0.45	0.9	2	0.2	93.7
RS-499 0920-0940	716	0.78	6.2	25.9	1	46.7	0.11	0.21	0.28	< .1	4.3	4.19	2.42	2.5	161	0.41	27.6	0.02	506	3.33	0.012	17.6	0.007	31.24	2.66	4.08	0.4	4.3	27.9	0.02	8.4	0.002	0.64	0.9	< 2	0.2	93.6
RS-499 0940-0960	3665	0.73	34.8	40.5	< 1	40.6	0.19	0.18	0.27	< .1	4.7	4.34	2.38	2.3	129	0.33	26.3	0.02	154	1.49	0.01	20.4	0.005	35.08	2.7	6.13	0.3	20.7	22.6	< .02	8.5	< .001	0.27	0.9	< 2	0.4	84.2
RS-499 0960-0980	2102	0.68	29.5	47.7	< 1	28.9	0.17	0.22	0.2	0.1	4.8	5.61	2.17	2.2	122	0.31	25	0.02	153	2.03	0.01	29.1	0.006	32.61	2.04	5.15	0.4	14.4	24.8	< .02	8.1	< .001	0.28	0.9	2	0.2	74.6
RS-499 0980-1000	1419	0.62	20.8	21.8	1	20.5	0.08	0.17	0.14	0.1	5.8	4.78	1.82	1.8	96	0.31	23.6	0.02	312	3.73	0.01	29.8	0.006	27.24	1.62	3.95	0.4	8.1	19.2	< .02	8.4	< .001	0.25	1.4	2	0.2	71.9
RS-499 1000-1020	2296	0.63	19.3	213.8	1	47.8	0.09	0.63	0.15	0.2	6.4	5.34	2.04	2.3	92	0.31	30.2	0.03	545	2.02	0.021	22.1	0.007	36.61	1.69	3.09	0.5	7.5	37	< .02	10.1	< .001	0.27	1.1	2	0.3	82.8
RS-499 1020-1040	2046	0.57	17.7	43.6	< 1	30	0.09	0.58	0.43	0.1	6.7	6.02	2.08	2.4	93	0.29	33.5	0.03	372	2.27	0.033	32.4	0.007	44.64	1.41	2.54	0.5	7.1	42.1	< .02	11.4	0.001	0.19	1.2	2	0.3	82.2
RS-499 1040-1060	1914	0.68	18	19.9	< 1	26.3	0.07	0.45	0.19	< .1	9.3	6.1	2.04	2.9	83	0.31	35.5	0.02	365	2.66	0.035	29.8	0.007	28.11	1.39	2.92	0.5	7.7	33.5	< .02	11.8	0.001	0.19	1.1	2	0.2	86.8
RS-499 1060-1080	920	0.92	11.4	5	2	30.6	0.07	0.64	0.81	0.1	10.1	8.2	2.45	4.1	55	0.4	37.7	0.03	757	3.9	0.045	82.9	0.007	17.44	0.74	1.79	0.6	3.9	35.3	< .02	12.8	< .001	0.16	1.9	4	0.2	77.9
RS-499 1080-1100	1148	0.94	10.3	13.1	< 1	39.7	0.08	0.36	0.33	< .1	7.1	6.01	2.27	3.7	58	0.47	41.1	0.02	737	3.11	0.024	58.9	0.007	23.22	1.61	5.45	0.5	7.9	30.9	< .02	14.4	< .001	0.36	1.8	2	0.3	78.6
RS-499 1100-1120	1018	0.88	11.6	21.5	2	39.8	0.06	0.23	0.19	< .1	6.7	5.48	2.06	3.1	58	0.43	38.8	0.03	454	2.95	0.021	44.2	0.006	22.28	1.66	4.34	0.4	5.7	29	< .02	13.6	< .001	0.28	1.6	2	0.3	74.4
RS-499 1120-1140	747	0.83	7.6	25.5	< 1	38	0.05	0.3	0.15	< .1	4.1	4.36	1.77	2.7	83	0.39	37.9	0.03	814	2.57	0.03	28.6	0.006	25.02	1.53	4.62	0.4	4.1	34.5	< .02	14.5	< .001	0.32	2.3	2	0.2	77.1
RS-499 1140-1160	502	0.82	6.1	6.2	1	49.1	0.05	1.04	0.2	0.1	4.1	5.32	1.51	3.3	49	0.4	42.7	0.02	958	2.18	0.031	34.2	0.007	19.21	0.57	1.32	0.6	1.9	52.2	< .02	14.6	< .001	0.14	3.4	2	< .2	77.7
RS-499 1160-1180	907	0.72	8.8	13.6	2	78.3	0.04	0.33	0.14	< .1	5.7	5.16	1.64	2.5	68	0.36	40.7	0.02	334	2.61	0.027	33.8	0.006	20.56	1.35	4.54	0.3	4.5	32.7	< .02	14.7	0.001	0.27	3.2	< 2	0.3	70.8
RS-499 1180-1200	1172	0.74	15.8	24.7	1	34.4	0.04	0.19	0.15	< .1	7.1	5.46	1.85	2.7	114	0.35	38.7	0.02	432	2.69	0.021	40.5	0.006	22.02	1.49	5.6	0.4	7.7	29.9	< .02	13.8	< .001	0.36	2.1	2	0.3	72.7
RS-499 1200-1220	738	0.76	10.6	28.7	1	42.7	0.05	0.18	0.13	< .1	5.3	8.39	1.9	2.8	58	0.35	38.8	0.01	690	2.78	0.024	38.7	0.006	22.06	1.65	5.96	0.4	5.3	29.6	< .02	13.8	< .001	0.28	2	< 2	0.3	77.5
RS-499 1220-1240	1068	0.68	14	24.4	1	27.8	0.04	0.21	0.26	0.1	6.6	5.02	1.95	2.2	75	0.3	38.8	0.02	417	2.82	0.02	27.7	0.006	23.4	1.7	5.34	0.3	6.8	35.5	< .02	13.4	< .001	0.31	3.6	< 2	0.4	75.9
RS-499 1240-1260	888	0.88	12.1	15	< 1	51.8	0.04	0.25	0.35	0.1	6.7	5.21	1.81	3.1	94	0.4	41.2	0.02	407	2.56	0.021	31.4	0.006	22	1.52	4.34	0.5	4.7	35.6	< .02	14.1	0.002	0.32	2.5	2	0.3	98.7
RS-499 1260-1280	538	0.77	7.6	5.6	2	42.4	0.05	0.43	0.13	0.1	8.7	6.38	2.13	3.1	47	0.4	43.3	0.02	619	3.66	0.034	59.8	0.007	17.11	1.24	3.2	0.6	2.2	35.1	< .02	15	< .001	0.34	1.7	3	0.3	75.6
RS-499 1280-1300	799	0.92	8.9	7.4	1	42.6	0.04	0.29	0.14	0.1	6.5	6.15	1.92	3.4	96	0.41	43.1	0.02	360	3.37	0.033	48.5	0.006	20.11	1.41	2.53	0.6	3.3	36.3	< .02	14.9	< .001	0.26	1.7	2	0.3	80.4
RS-499 1300-1320	1399	0.67	17.8	68	1	40.6	0.12	0.41	0.16	0.1	7.4	8.55	2.16	2.4	82	0.31	35.6	0.02	494	2.46	0.03	51.1	0.006	22.34	1.41	2.96	0.5	7	44.7	< .02	11.5	< .001	0.19	1.2	2	0.3	76.4
RS-499 1320-1335	875	0.67	10.1	7.8	1	57	0.03	0.88	0.18	0.1	9.6	6.36	1.78	2.9	58	0.28	40.5	0.06	742	3.6	0.057	30.6	0.006	19.48	0.53	1.46	0.8	3.3	60	< .02	13.3	< .001	0.13	2.8	2	0.2	73.9
34763	32458	0.85	61.7	2436.9	< 1	79.6	0.6	0.82	0.2	2.5	22.5	11.62	1.76	2.4	200	0.35	17	0.09	239	8.33	0.027	11.1	0.059	20.5	2.02	10.65	0.4	18.2	77.1	0.03	3.3	< .001	0.3	0.6	3	0.3	75.7
STANDARD DS2	271	1.69	57.2	196.9	3	147.5	10.54	0.53	10	11.3	159.9	127.33	3.02	6.1	221	0.15	15.8	0.59	823	13.72	0.032	36.1	0.089	32.5	< .01	8.38	2.7	2.2	28.6	1.76	3.5	0.093	1.77	17.9	73	6.5	159

WELLBORE NAVIGATION,INC.
WINNEMUCCA, NEVADA

GYROSCOPIC DIRECTIONAL SURVEY
BY MINIMUM CURVATURE

FOR

****
* HECLA MINING COMPANY *
****

JOB NUMBER: 29-0588-311

WELL NAME: RS-499

LOCATION: ROSEBUD MINE

SURVEY DATE: 05/11/2000

SURVEY ENGINEER: VERN REID

GYRO REFERENCE BEARING: TRUE NORTH

TIE-ON COORDINATES AT: 0 M.D.
TAKEN FROM: COLLAR

VERTICAL SECTION CALCULATED IN A
PROPOSAL DIRECTION OF: 000.00
WATER CONTACT= FOAM @ SURFACE

****
****** DEPTH MEASURED IN FEET *******
****

COMMENTS: ***** EKLUND ****
** DON SCHOORL **

VIEW LOOKING @ 270.00°.

****
****
*** THIS DIRECTIONAL SURVEY REPORT IS ****
** CORRECT TO THE BEST OF MY KNOWLEDGE ***
* AND IS SUPPORTED BY ACTUAL FIELD DATA! *
**
**
**
**
COMPANY REPRESENTATIVE
**
**
****
****

WELLBORE NAVIGATION, INC.
WINNEMUCCA, NEVADA

JOB NUMBER: 29-0588-311

WELL NAME: RS-499

INRUN SURVEY
BY MINIMUM CURVATURE

MEAS. DEPTH	VERT. DEPTH	VERT. SECT.	L/R PROP.	INCL HORZ	BEARING AZIMUTH	COORDINATES LATITUDE	COORDINATES DEPARTURE	D-LEG /100	D-LEG /CL	STATION DISPLACEMENT DISP.	STATION DISPLACEMENT DIRECTION	TEMP. DEG F
0.0	0.00	0.00	0.000	-89.17	288.58	0.00 N	0.00 E	0.00		0.00	AT 000.00	
50.0	49.99	0.37	-0.628	-89.13	311.42	0.37 N	0.63 W	0.68	0.34	0.73	AT 300.27	062.52
100.0	99.99	0.17	-0.829	-88.95	169.52	0.17 N	0.83 W	3.63	1.82	0.85	AT 281.40	062.75
150.0	149.98	-0.77	-1.118	-88.60	217.58	0.77 S	1.12 W	2.10	1.05	1.36	AT 235.54	063.41
200.0	199.96	-1.87	-2.052	-88.08	222.01	1.87 S	2.05 W	1.07	0.54	2.78	AT 227.59	064.13
250.0	249.93	-3.32	-3.215	-87.66	216.22	3.32 S	3.22 W	0.94	0.47	4.62	AT 224.08	064.54
300.0	299.88	-5.09	-4.454	-87.38	213.81	5.09 S	4.45 W	0.60	0.30	6.77	AT 221.17	064.92
350.0	349.84	-6.85	-5.084	-88.14	179.59	6.85 S	5.08 W	3.01	1.50	8.53	AT 216.57	065.44
400.0	399.82	-8.38	-5.065	-88.36	178.89	8.38 S	5.06 W	0.44	0.22	9.79	AT 211.15	065.78
450.0	449.80	-9.77	-4.925	-88.43	169.44	9.77 S	4.93 W	0.55	0.27	10.94	AT 206.76	066.01
500.0	499.79	-10.87	-4.786	-89.03	178.06	10.87 S	4.79 W	1.26	0.63	11.87	AT 203.77	066.34
550.0	549.78	-11.48	-5.446	-88.39	253.79	11.48 S	5.45 W	3.32	1.66	12.71	AT 205.37	066.69
600.0	599.75	-11.42	-7.130	-87.61	284.43	11.42 S	7.13 W	2.59	1.30	13.46	AT 211.98	067.19
650.0	649.70	-10.86	-9.200	-87.47	286.09	10.86 S	9.20 W	0.31	0.16	14.23	AT 220.28	067.41
700.0	699.66	-10.37	-11.126	-87.97	282.00	10.37 S	11.13 W	1.05	0.53	15.21	AT 227.03	067.71
750.0	749.62	-10.18	-13.061	-87.55	270.28	10.18 S	13.06 W	1.24	0.62	16.56	AT 232.08	068.07
800.0	799.57	-10.37	-15.379	-87.10	260.93	10.37 S	15.38 W	1.25	0.63	18.55	AT 236.01	069.65
850.0	849.50	-10.67	-17.976	-86.90	265.61	10.67 S	17.98 W	0.63	0.32	20.91	AT 239.30	068.90
900.0	899.42	-10.76	-20.820	-86.57	270.63	10.76 S	20.82 W	0.87	0.44	23.44	AT 242.67	069.00
950.0	949.32	-10.62	-23.898	-86.36	274.33	10.62 S	23.90 W	0.62	0.31	26.15	AT 246.03	069.94
1000.0	999.21	-10.29	-27.246	-85.92	277.04	10.29 S	27.25 W	0.95	0.48	29.12	AT 249.32	070.72
1050.0	1049.07	-9.85	-30.934	-85.56	276.48	9.85 S	30.93 W	0.72	0.36	32.46	AT 252.34	071.99
1100.0	1098.92	-9.60	-34.819	-85.50	270.82	9.60 S	34.82 W	0.89	0.44	36.12	AT 254.58	073.14
1150.0	1148.72	-9.79	-39.306	-84.18	265.23	9.79 S	39.31 W	2.82	1.41	40.51	AT 256.02	074.49
1200.0	1198.42	-9.47	-44.750	-83.19	280.26	9.47 S	44.75 W	3.84	1.92	45.74	AT 258.05	076.06
1250.0	1247.99	-7.78	-51.068	-81.74	288.79	7.78 S	51.07 W	3.66	1.83	51.66	AT 261.33	077.59
1300.0	1297.43	-5.29	-58.104	-81.09	290.14	5.29 S	58.10 W	1.36	0.68	58.34	AT 264.79	081.11

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*************************************************************
*                          ********                         *
*      THE HORIZONTAL DISPLACEMENT AT THE DEPTH OF          *
*                          ********                         *
*  1300.0 FEET EQUALS     58.34    FEET AT   264.79         *
*                          ********                         *
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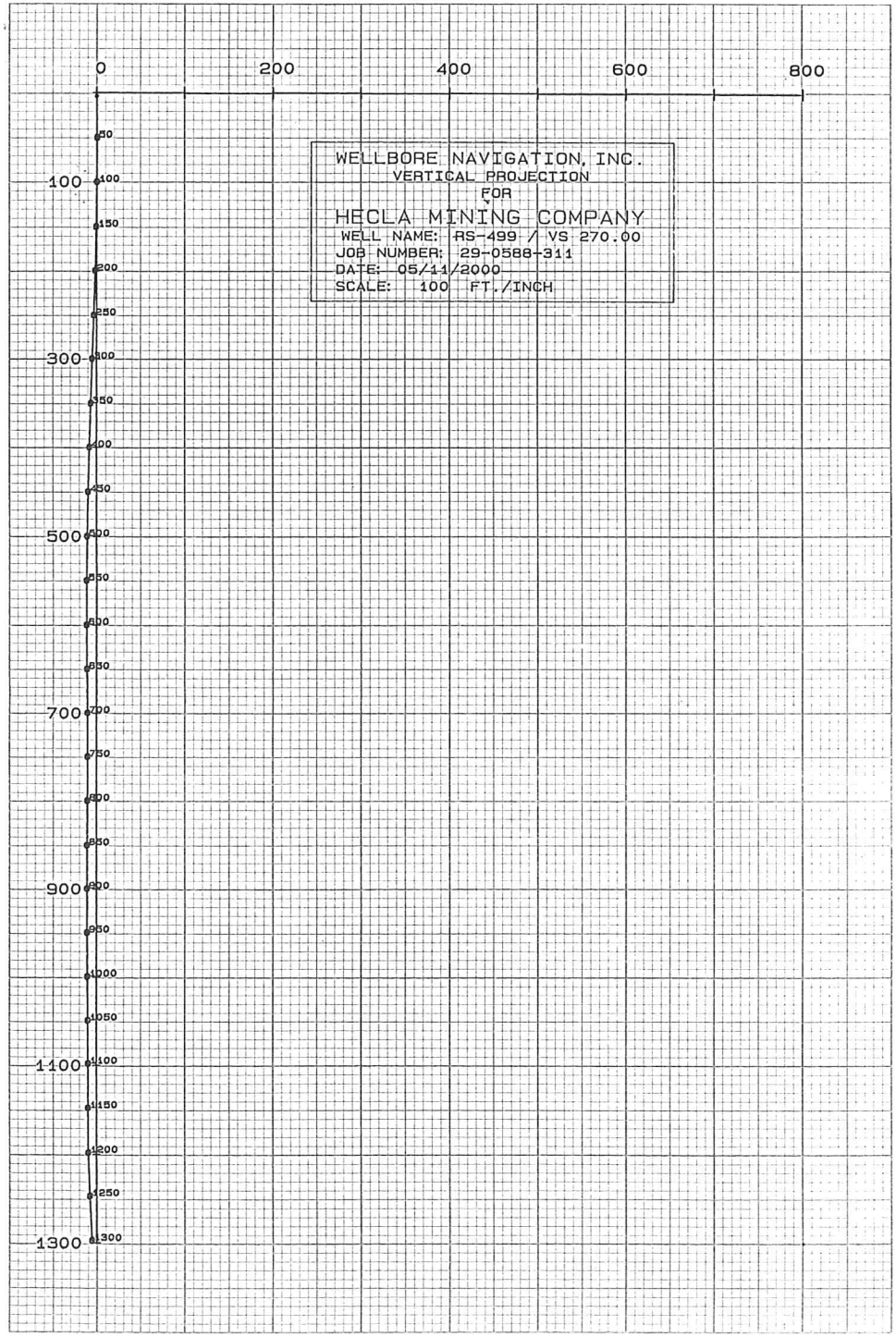
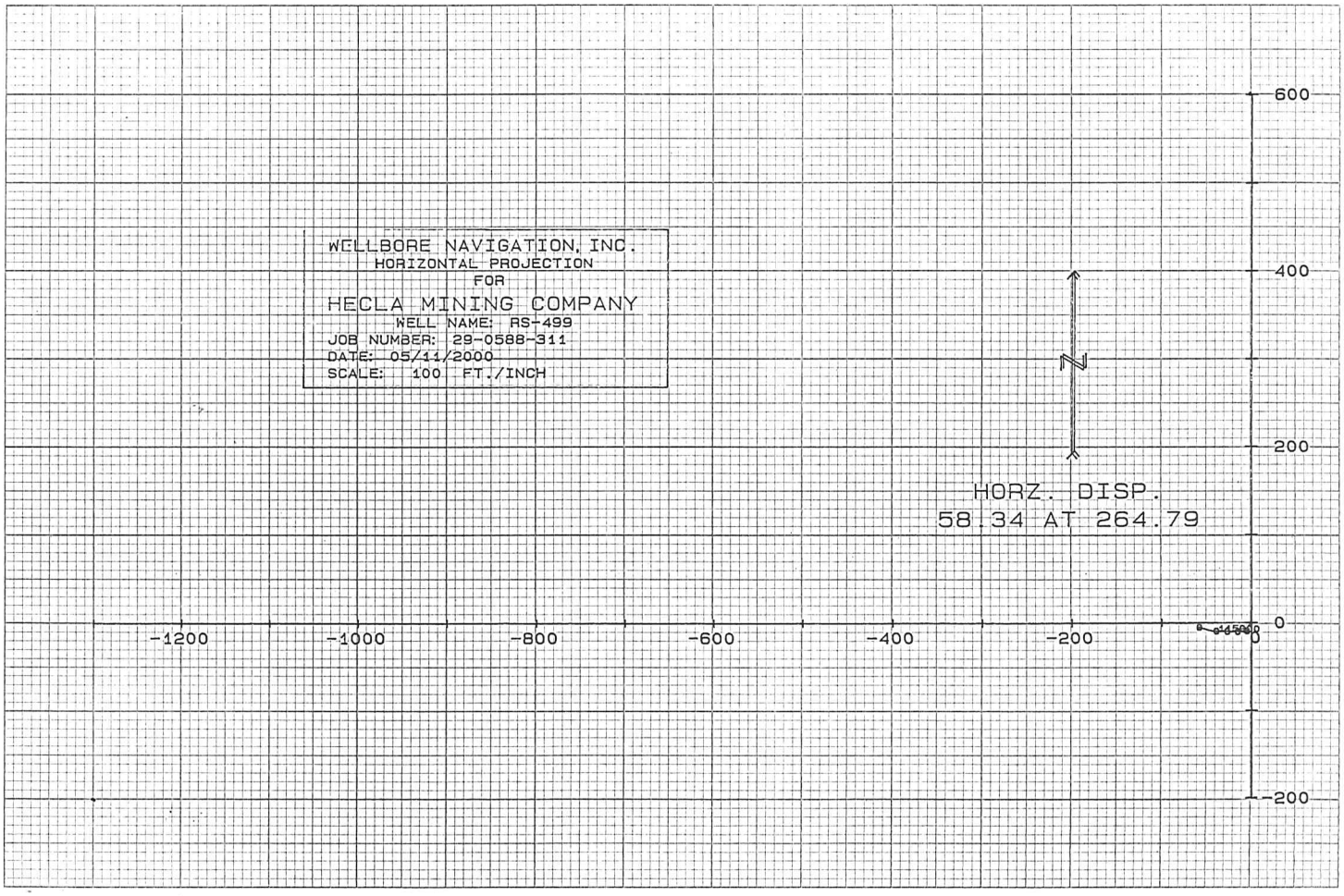
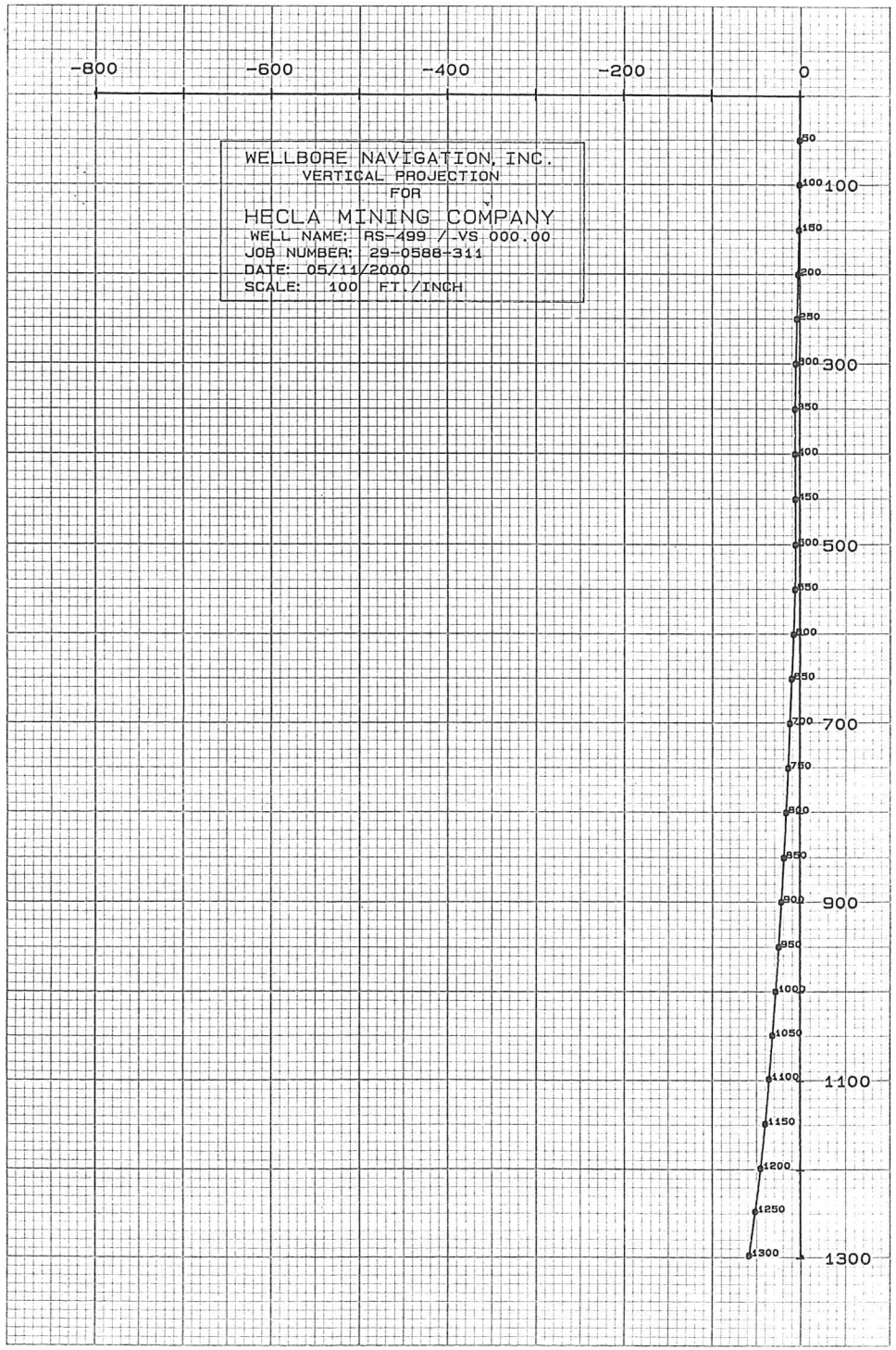
STARLIGHT PRINTING (801) 467-2881




WELLBORE NAVIGATION, INC.
HORIZONTAL PROJECTION
FOR
HECLA MINING COMPANY
WELL NAME: RS-499
JOB NUMBER: 29-0588-311
DATE: 05/11/2000
SCALE: 100 FT./INCH
N
HORZ. DISP.
58.34 AT 264.79
600
400
200
0
-200
-1200
-1000
-800
-600
-400
-200
0


-800
-600
-400
-200
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WELLBORE NAVIGATION, INC.
VERTICAL PROJECTION
FOR
HECLA MINING COMPANY
WELL NAME: RS-499 /-VS 000.00
JOB NUMBER: 29-0588-311
DATE: 05/11/2000
SCALE: 100 FT./INCH
50
100
100
150
200
250
300
300
350
400
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1200
1250
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1300

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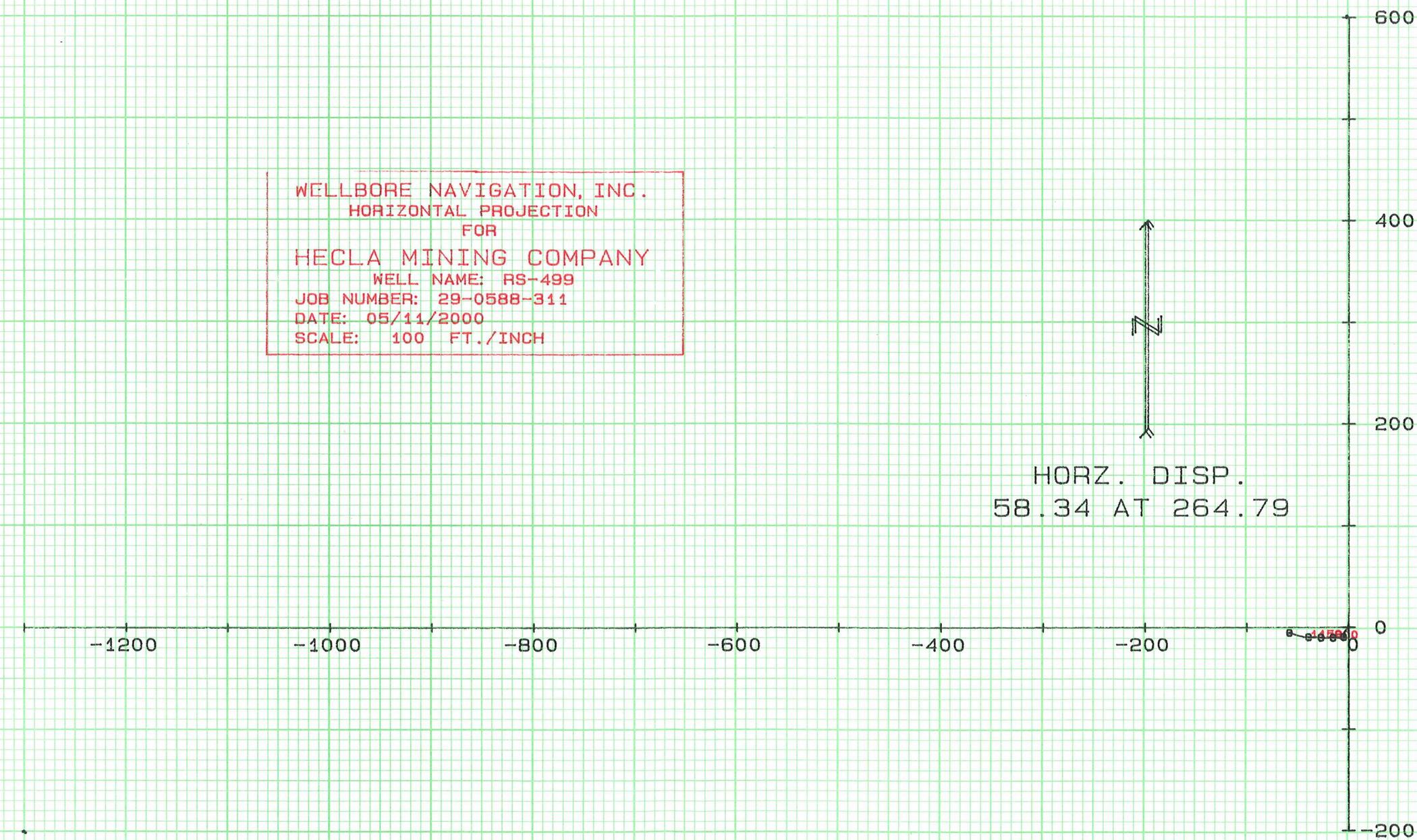
WELLBORE NAVIGATION, INC.
HORIZONTAL PROJECTION
FOR
HECLA MINING COMPANY
WELL NAME: RS-499
JOB NUMBER: 29-0588-311
DATE: 05/11/2000
SCALE: 100 FT./INCH



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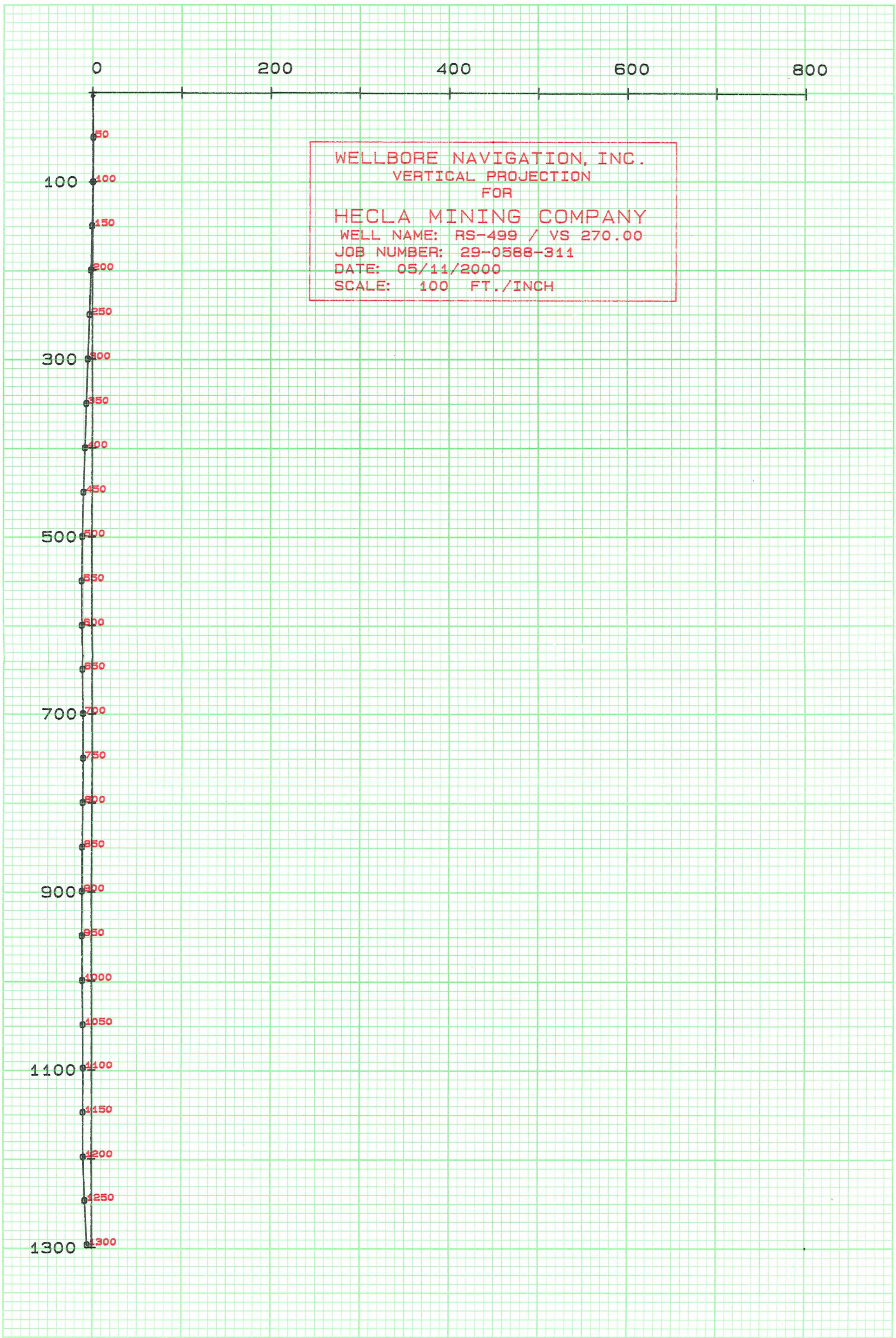
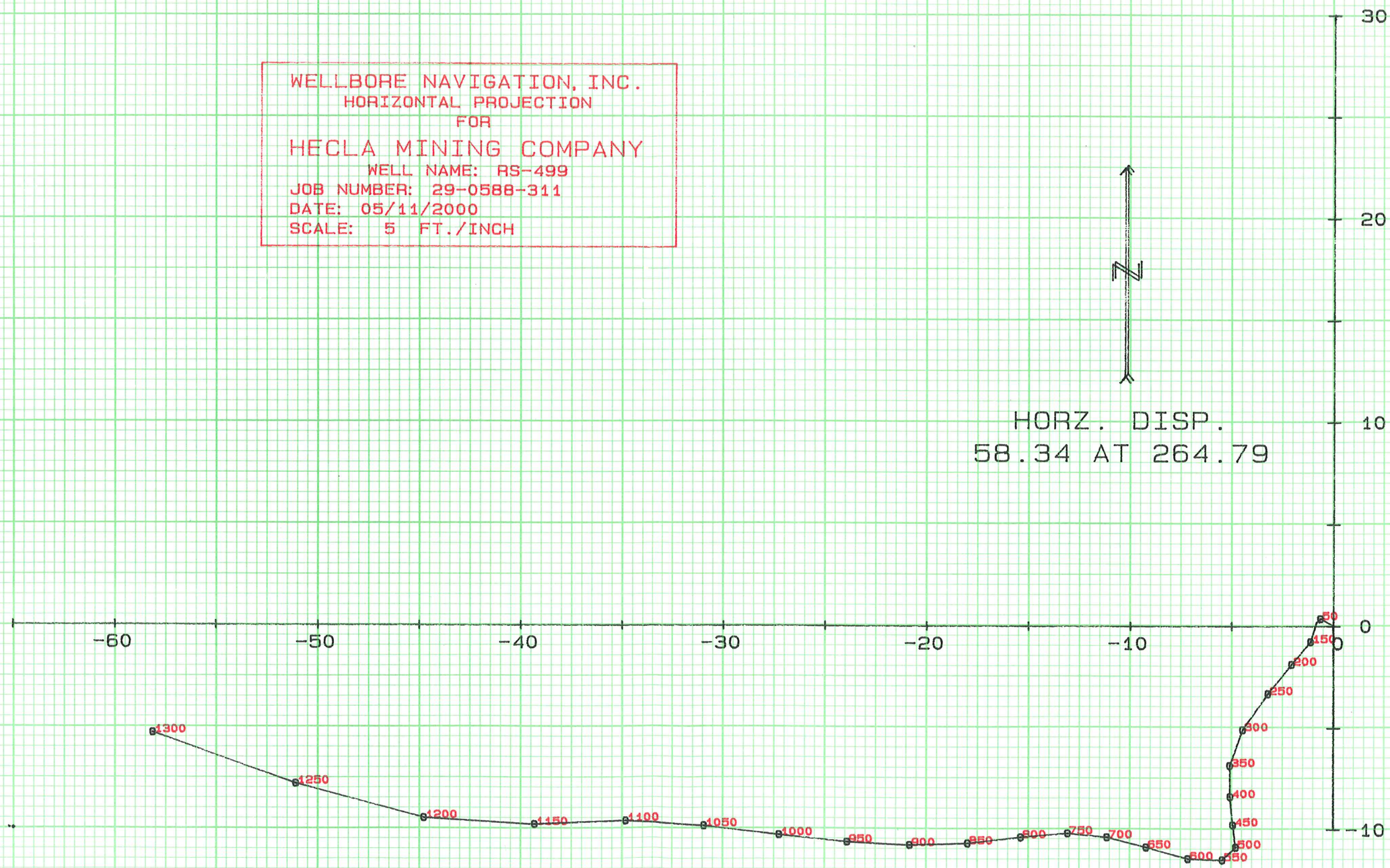


WELLBORE NAVIGATION, INC.
HORIZONTAL PROJECTION
FOR
HECLA MINING COMPANY
WELL NAME: RS-499
JOB NUMBER: 29-0588-311
DATE: 05/11/2000
SCALE: 5 FT./INCH



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